HYDR*IM* C61wd G4

INSTRUMENT WASHER

- Service Manual

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1 Introduction

1.1 Overview

This guide provides instructions for the servicing and repair of the HYDR*IM*® C61wd G4 Instrument Washer. Every attempt has been made to provide accurate, detailed instructions.

HYDR*IM* C61wd G4 instrument washer cycle description chart

Cycle	Prewash	Wash	Rinse	Dry
P0 – Machine Cleaning Cycle No initial draining.	<30°C (cold) 2 minutes	N/A	<30°C (cold) 2 minutes	N/A
P1 – Rinse and Hold Cycle Use to prevent soil from drying on instruments when they will not be washed within one hour.	<30°C (cold) 2 minutes	N/A	<30°C (cold) 1 minute	N/A
P2 – Regular Cycle (no disinfection) – Use for moderately soiled loose instruments.	<30°C (cold) 2 minutes	50°C 5 minutes	60°C 1 minute	1-25 minutes (default 10 minutes)
P3 – Heavy Duty Cycle with disinfection – Use for heavily soiled instruments and cassettes.	<30°C (cold) 2 minutes	50°C 9-15 minutes	90-95°C 5 minutes	1-25 minutes (default 10 minutes)
P4 – Custom (A_0 between A_0 = 3,500 (rinse) and A_0 = 6,000)	<30°C (cold) 2 minutes	50°C selection available for 5-9 minutes	90-95°C adjust. from 1 to 5 minutes	1-25 minutes (default 8 minutes)
P5 – Special Cycle 93°C 10 minutes. Technician access only. This cycle can be used to deal with special epidemic situations. There is no draining of the unit until the end of the disinfection phase; disinfection is performed during wash.	N/A	90-95°C 10 minutes	70°C 5 minutes	1-25 minutes (default 8 minutes)

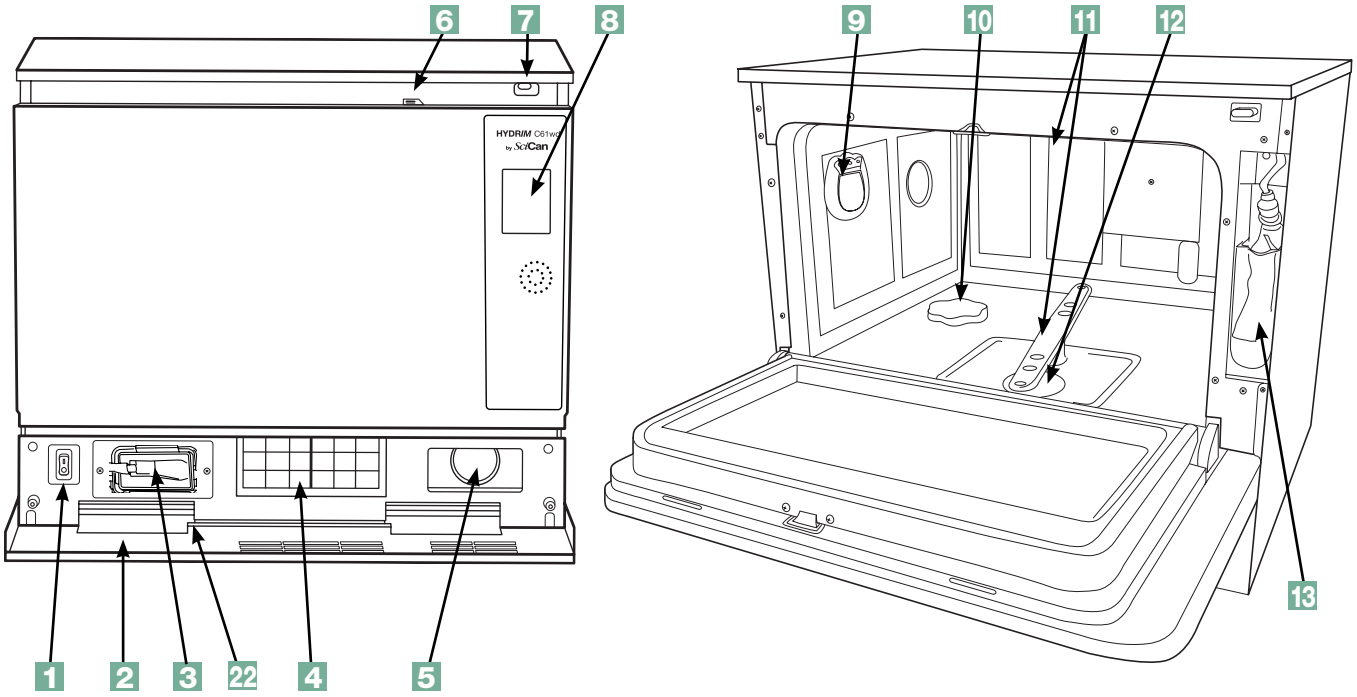
The P3, P4 and P5 disinfection temperature reflects the minimum guaranteed temperature at any time during disinfection anywhere in the wash chamber. However, the disinfection temperature is set to be around 93°C, with an upper switch point of the heater at 94°C and a lower switch point of 92°C.

The disinfection time of P4 can be increased by 1 minute incremental intervals from 1 to 5 minutes. The minimum disinfection time is 1 minute with a minimum A0 value of 3500. The minimum A0 value for disinfection time of 5 minutes is 6000. The final rinse time has to be set and validated by a technician after installation in the office.

1 Introduction

1.2 HYDRIM Unit at a glance

Figure 1



1 Power switch
2 Kickplate
3 Bacteriological air filter (if fitted)
4 HEPA filter
5 Dryer exhaust
6 Door latch
7 USB port
8 LCD touchscreen
9 Dryer outlet
10 Water softener
11 Wash arms (top not shown)
12 Coarse filter
13 Cleaning solution and drawer
14 Drain outlet
15 Ethernet port
16 RS232 port
17 Cold water inlet
18 Hot water inlet
19 R/O water inlet
20 Fuses
21 Power cable connection
22 Drain tube (behind kickplate)

Rear Connections

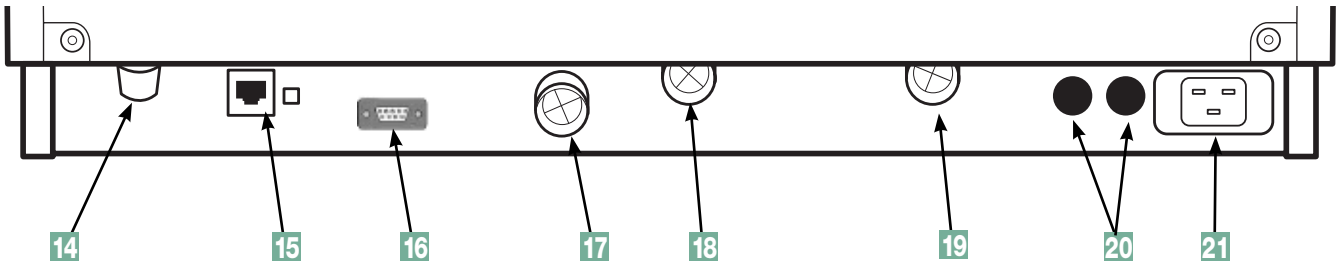


Figure 2

The following symbols appear in the margins of this book.

A potential hazard to the operator.

A situation that may lead to a mechanical failure.

Important information

The following symbols appear on the unit:

Caution: Hot Surface and/or Hot Steam

Caution: Risk of electrical shock. Disconnect supply before servicing.

Caution: Refer to manual for details.

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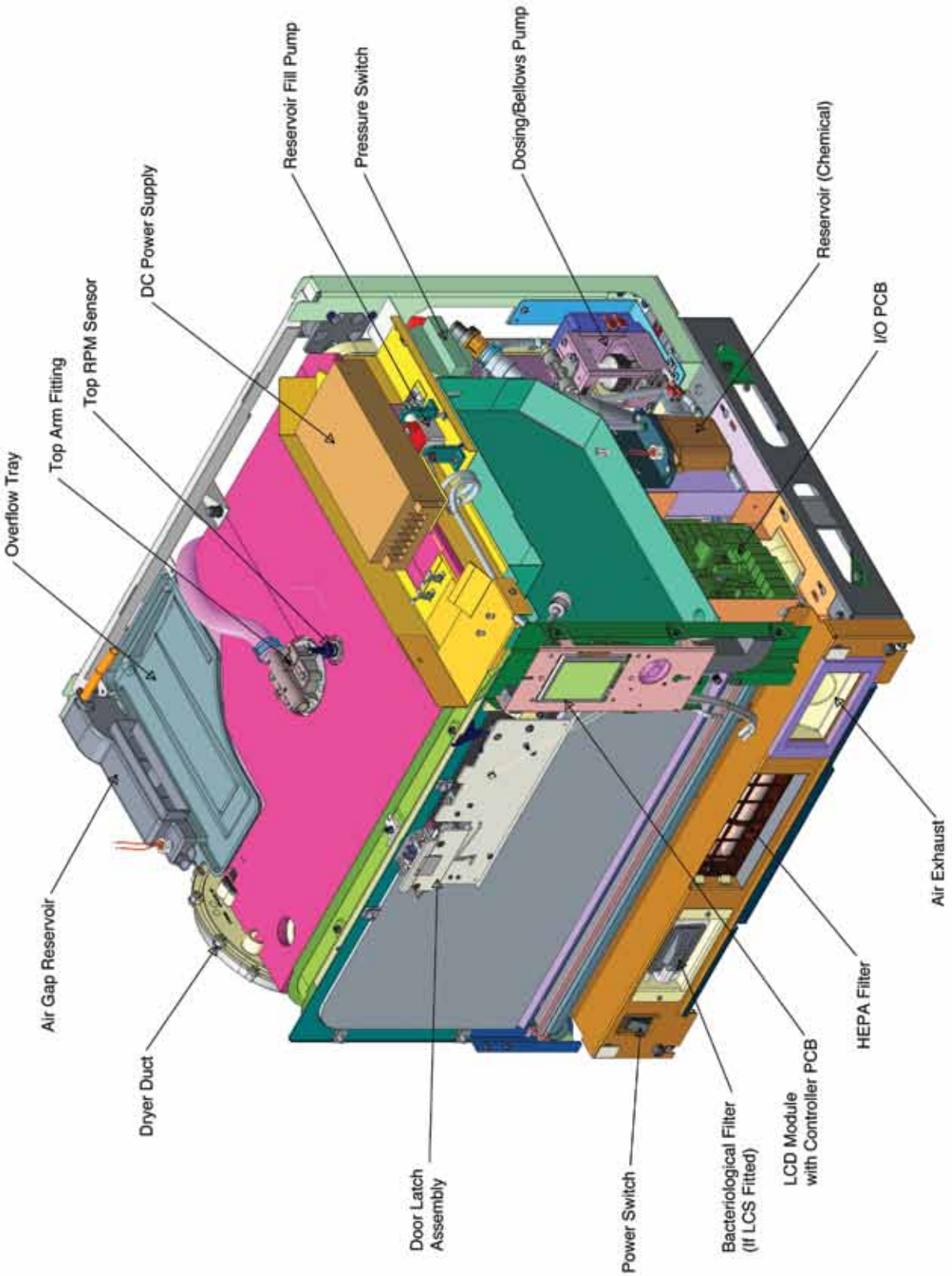
With cover and panels removed

- **Top View (from front right)**

Figure 3



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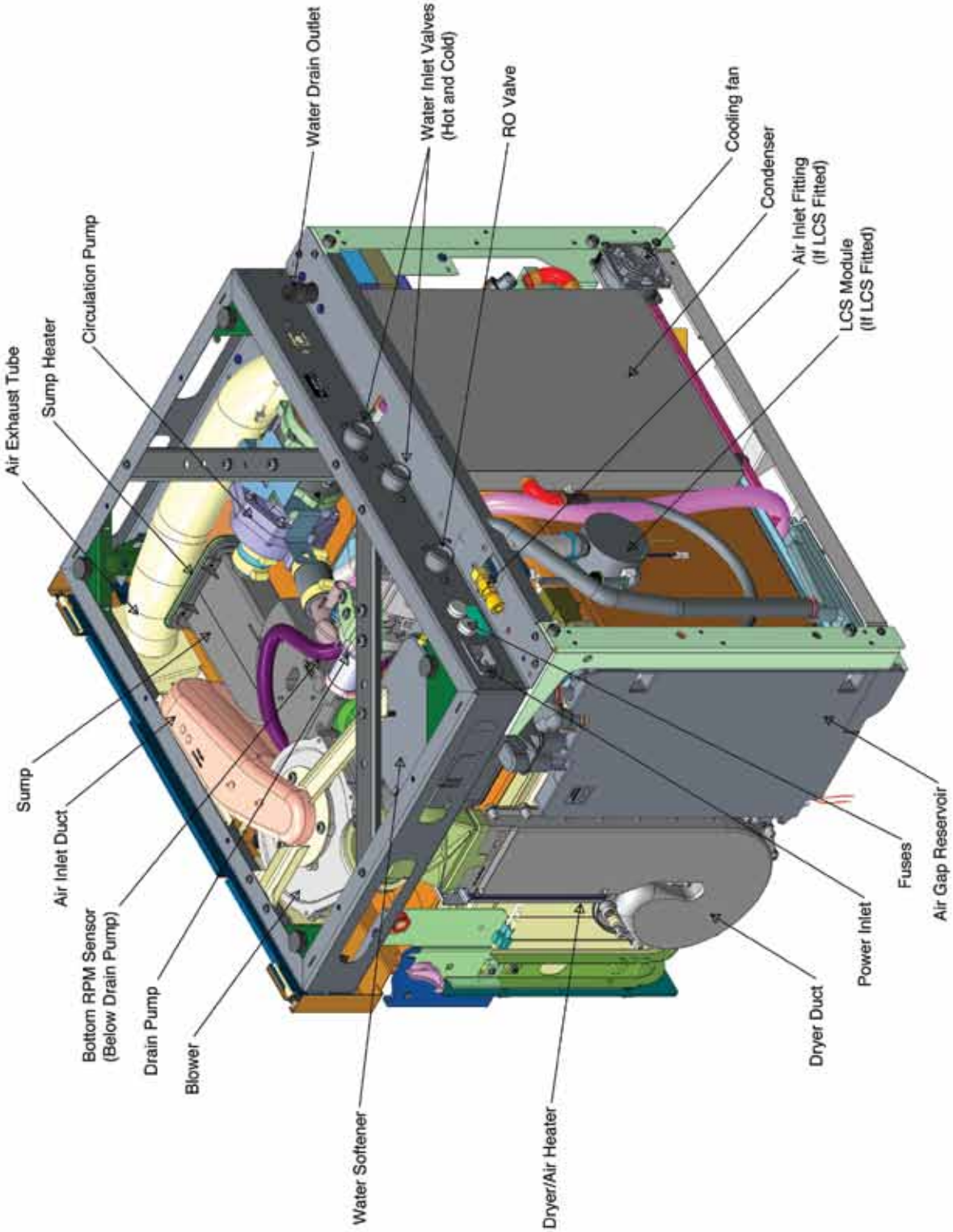
- **Bottom View (from back left)**

Figure 4



1 Introduction

1.3 Specifications

Machine dimensions:	Length:	52 cm	20.5"
	Width:	59.8 cm	23.5"
	Depth:	52.6 cm	20.7"
	Depth with door open:	82.9 cm	32.6"
Weight :		44 kg	97 lbs
Running noise:		65 dB	
Hot and cold water connections		G 3/4"	
Inlet water pressure:		1-10 bar	
Incoming hot water temperature:		60°C	140°F
Drain:		3/4"	
Drying system:		Heater 1 kW	
Electrical connection:		200-230VAC ±10%, single-phase, 50 Hz, 12A 60 Hz, 12A	
Protection class:		Class I	
Equipment pollution degree:		Pollution degree 2	
Equipment installation category:		Installation category II	
Maximum relative humidity:		80% for temp up to 31°C/88°F 50% for temp up to 40°C/104°F	
Operating temperature range:		5°C - 40°C	41°-104°F
Max. altitude:		2000 m	6,562 feet
Mains supply:		+ / -10% of nominal	
Fuses:		15A, 250V, Type F	

1 Introduction

1.4 Safety information

The following symbols appear in the margins of this book.

A potential hazard to the operator.

A situation that may lead to a mechanical failure.

Important information

The following symbols appear on the unit:

Caution: Hot Surface and/or Hot Steam

Caution: Risk of electrical shock. Disconnect supply before servicing.

Caution: Refer to manual for details.

Safe operation

The following apply to both operators and service technicians:

- Exercise caution and seek assistance when lifting or carrying the unit.
- Cleaning solutions may irritate. Avoid contact with eyes, skin and mouth.
- Never lean on the open door. The unit may tip forward causing injury.
- Always turn the unit OFF before adding softener salt or solutions. Before performing routine maintenance or servicing the unit, turn the unit OFF and unplug the power cord from the power source.
- The operator should never remove the cover of the unit or insert objects through holes or openings in the cabinetry. Doing so may damage the unit and/or pose a hazard to the operator.
- If the unit is used in a manner other than that specified, the protection provided by the equipment may be impaired.

Safe servicing

- The HYDR*IM* C61wd G4 Instrument Washer should only be installed and serviced by a qualified contractor as it is an Installation Category 2 device. The contractor should be experienced in installing equipment that requires electrical hook-up as well as plumbing.
- SciCan shall not be liable for incidental, special or consequential damages caused by any maintenance or services performed on the HYDR*IM* C61wd G4 by a third party or for the use of equipment or parts manufactured by a third party, including lost profits, any commercial loss, economic loss, or loss arising from personal injury.
- All local, regional, state, and national regulations regarding the servicing of this class of device and safety requirements must be observed.

When the cover and panels are removed:

- Hazardous voltages are accessible. Disconnect the power cord before removing the cover or any panels.
- Sharp metal edges are exposed. Be careful, and wear long sleeves and gloves.

Power main

- If the cover or panels are removed, a dielectric strength test (hi-pot) must be performed on the unit once the cover or panels are reinstalled.

Ground

- If the cover or panels are removed, a protective bonding impedance test (ground continuity) must be performed on the unit once the cover or panels are reinstalled.

Reporting

- It is vital for SciCan to learn of any problem in the field. This information will help SciCan solve the problem quickly and improve product reliability in new units.

Biological waste

- Waste water in the unit may contain biological contaminants; use a mechanical means to siphon the contents. Wear disposable rubber gloves. Dispose of absorbent material according to biological waste disposal regulations.

1.5 Tools and hardware

Tools required for servicing include:

- Needle-nose pliers
- Wrench
- Nut driver
- Hose clamp pliers
- Screwdriver Philips
- Wire stripper
- Screwdriver slot
- Spring clamp pliers
- Silicone applicator with silicone

Electrical Safety test equipment:

- Hi-Pot tester
- Ground continuity tester
- Static strap
- Static bags

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The unit contains the following types of hardware:

- Phillips pan head self-tapping metal screws
- Phillips pan head stainless steel machine screws
- Spring clamps
- Band / Gear clamps
- Cable ties

1.6 Shipping instructions

The unit should be serviced on site. If it is necessary to send the unit back to the dealer, follow these instructions:

- Run the ‘Prepare for Shipping’ cycle in the setup menu to remove most of the water from the system before shipping the unit.
- Use the tube clipped under the front of the unit to drain any residual water from the air gap.
- If there is standing water in the chamber, siphon or ladle as much water as possible and use an absorbent cloth to remove the rest.
- Disconnect and remove the cleaning solution container and then drain the dosing reservoir.
- Screw in the leveling legs.
- Specify upright, heated, and insured shipping.
- Ensure unit is returned on a pallet with at least two banding straps securing the box to the pallet. If original packaging is unavailable packaging can be ordered with part # 01-113317S.

- Shipping outside of these conditions can affect warranty.

1 Introduction

1.7 Installation

IMPORTANT INFORMATION

- To open the wash chamber door if the door is locked and the unit is not functional, release the lever located on the top edge of the door and pull the door open.
- Ensure that HIP™ Ultra cleaning solution (instrument wash chemical) is available. All other supplies are included with your unit.
- The HYDR*IM* C61wd G4 is heavy (44 kg). Exercise caution when moving it.
- The HYDR*IM* C61wd G4 must be properly grounded.
- The HYDR*IM* C61wd G4 is equipped with an air gap / anti-suction device to prevent backflow of dirty water into the water supply. No other air gap device is necessary.

Detailed installation instructions are available in a separate document.
Installation should only be undertaken by a manufacturer approved technician. The use of an unapproved installer may invalidate the warranty. A separate pre-installation checklist should have been supplied to the user by the dealer. Please review this prior to approving installation.

If the HYDR*IM* C61wd G4 is installed in a sterilization center, the manufacturer of the sterilization center should allow enough space at the top, back and both sides of the unit to facilitate installation, leveling, and service access to the unit.

During installation, all consumables should have been added to the machine as appropriate. It is important to check that this has been undertaken before starting the machine.

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1.8 Setting the water softener

The HYDR*IM* C61wd G4 is equipped with a built-in water softening system that must be adjusted according to the local water hardness. To read local water hardness, proceed as follows:

1. The water test kit included with your HYDR*IM* contains three water hardness test strips in bags. Take a water sample from the location where the machine will be installed.
2. Open one of the bags, remove the test strip and dip it into the water.
3. Compare the color of the strip with the chart on the back of the bag Determine the water hardness according to the chart on the water test kit envelope.
4. Power the unit on and select the Settings key from the main menu.
5. Go to the Setup Menu, Cycle Settings, and select “Set Regeneration”.
7. Using the up and down arrows, set the water softener regeneration level according to the water hardness table in this section. If your water hardness falls between two settings, select the higher setting.
8. Unscrew the water softener container lid from the bottom left of the chamber and pour 0.5 litres of water into the water softener container.
9. Add 0.5 kg of water softening salt to the water softener container, using the supplied funnel to prevent any salt from spilling into the chamber, and close by screwing the lid **tightly** back into place. An improper seal can lead to corrosion.

Water hardness and salt regeneration levels

	°dH	US GPG	PPM	Regen.
Very Soft	1	1.0	18	1
	2	2.1	36	
	3	3.1	54	
	4	4.2	71	
Soft	5	5.2	89	
	5.6	5.8	100	
	6	6.3	107	2
	6.2	6.4	110	
	7	7.3	125	
	8	8.3	143	
Slightly Hard	8.4	8.8	150	3
	9	9.4	161	
	10	10.4	178	
	10.1	10.5	180	
	11	11.5	196	
	11.2	11.7	200	4
	11.8	12.3	210	
	12	12.5	214	
Moderately Hard	13	13.6	232	
	14	14.6	250	
	15	15.6	268	5
	16	16.7	286	
	16.8	17.5	300	6
	17	17.7	303	
	18	18.8	321	
Hard	19	19.8	339	
	19.6	20.5	350	
	20	20.9	357	
	20.2	21.0	360	
	21	21.9	375	7
	22	22.9	393	
	22.4	23.4	400	
	23	24.0	411	
	24	25.0	428	
	25	26.1	446	
	25.2	26.3	450	
	26	27.1	464	
	27	28.2	482	
	28	29.2	500	
	28.6	29.8	510	
	29	30.2	518	
	30	31.3	535	
Very Hard	30.3	31.6	540	8
Extremely Hard	>30.3	>31.6	>540	Additional Water treatment required

*Please note: The water test strip is only accurate up to 250 ppm. If the reading on the test strip exceeds 250 ppm and/or if the location in which the HYDR*IM* is installed has known water quality problems, having a more detailed and accurate water test done by a test lab is strongly recommended.

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IMPORTANT: The HYDR*IM*'s water softening system reduces the water hardness by taking out Calcium Carbonate. If the water testing results show that the water hardness is outside the unit's range of adjustment, or if other dissolved solids in the water cause stains or deposits on the instruments or chamber, an external water treatment system may be required.

1.9 Setting the language

The messages displayed by your HYDR*IM* can be presented in a number of different languages. To change the current language, follow these steps:

1.
2. Scroll to **Language Selection** and select.
3. From the LANGUAGE screen, press to scroll through the list of languages. When you have found the desired language, press to save your selection and return to the Setup menu.

1.10 Setting the country

1.
2. Scroll to **Country** and select.
3. Using the keypad, type the name of the country and press **EN** to select. Press to save and return to the Setup menu.

1.11 Setting the time

1.
2. Scroll to **Date / Time** and select Time Setup.
3. From the TIME screen, use the keypad to set the time. Press **EN** to save and to return to the Setup menu.

NOTE: If the HYDR*IM* is connected to a network, it is important to also enter the correct Time Zone. Enter the Time submenu, select Time Zone and scroll and select your local time zone.

4. To change your unit to display 12-hour time format (24-hour time format is the default setting), go to the Setup menu and use ▲▼ to scroll to TIME 12/24, select it and toggle to 12. Press ▶ to save and return to the Setup menu.
5. To activate daylight savings time (DST), go to the Setup menu and use ▲▼ to scroll to DST ON/OFF and select. Use ▲▼ to toggle DST ON or OFF and press the ▶ to save and return to the Setup menu.

1.12 Setting the date

1.
2. Scroll to **Date / Time** and select Date Setup.
3. From the DATE screen, use the keypad to set the date. Press **EN** to save and ▶ to return to the Setup menu.
4. To change the format in which the date appears, return to the Setup menu and use ▲▼ to scroll to DATE FORMAT. Select it, and follow the prompts to have the date displayed in the desired format. Press ▶ to save and return to the Setup menu.

1.13 Assigning unit identifier number

1.
2. Scroll to **Unit No** and select.
3. Using the keypad, select a maximum of 3 digits to be used as the unit's identifier number. Press **EN** to save and ▶ to return to the Setup menu.

1.14 Resetting the drying counter

The drying counter must be reset when the HEPA filter is changed. User will be prompted every 750 cycles to do preventative maintenance, which is triggered by the reminder to change the HEPA filter. To reset the drying counter, follow these steps:

1.
2. Scroll to **Reset Drying Counter** and select.
3. Select Default 0 to reset. This will stop the reminder to the end user.

1.15 Resetting the LCS counter

If the unit is fitted with a lumens cleaning system, the LCS counter must be reset when the LCS system is used and the biological filter is changed. To reset the LCS counter, follow these steps:

1.
2. Scroll to **Reset LCS Counter** and select.
3. Select Default 0 to reset.

1.16 Adjusting the screensaver delay

To change the length of time before the screensaver is activated, follow these steps:

1.
2. Scroll to **Screensaver** and select.
3. Use to scroll through your time options. When you have found the amount of time you require, press it. Press to save and return to the Setup menu.

1.17 Adjusting the temperature display

1.
2. Scroll to **Temperature C/F** and select.
3. Use to choose between having information displayed in degrees Celsius or Fahrenheit. Press to save and return to the Setup menu.

1.18 Turning the button sound ON or OFF

The HYDR/*M* is preset to beep when a button is pressed. If you would like to turn the button sound off, follow these steps:

NOTE: Turning OFF the button sound does NOT turn off other alarms and cycle notification beeps.

1.
2. Scroll to **Beep ON/OFF** and select.
3. Use to scroll through your ON or OFF options and select it by pressing it. Press to save and move back to the Setup menu.

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1.19 Adjusting the button beep volume

If you would like to adjust the beep volume, follow these steps:

1.
2. Scroll to **Beep Volume** and select.
3. Use to scroll through the volume settings. Select the one you want by pressing it. Press to save and move back to the Setup menu.

1.20 Adjusting the salt regeneration

Salt regeneration should be set according to the local water hardness. See section 1.8 Setting the water softener for instructions on determining correct settings. To set salt regeneration, follow these steps:

1.
2. Scroll to **Set Regeneration** and select.
3. Use to change the value. The default setting is 1. Press to save and return to the Setup menu.

1.21 Adjusting the screen contrast

The touchscreen is calibrated for the lighting condition of most sterilization centers. Should you need to adjust the contrast for your office, follow these steps:

1.
2. Scroll to **LCD Contrast** and select.
3. Use to scroll through your contrast options. When you have found the contrast you require, press it. Press to save and return to the Setup menu.

1.22 Changing the touchscreen display themes

The touchscreen themes (i.e. icons and background colours) can be changed to one of the preset options. To change themes follow these steps:

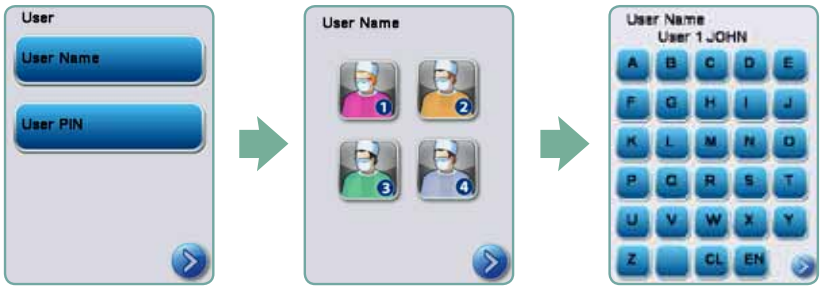
1.
2. Scroll to **Theme** and select.
3. In the **Change Theme** screen, use to scroll through your available options. As you scroll, each theme will display on the touchscreen. Press to select your theme and return to the Setup menu.

1 Introduction

1.23 Creating a User Name

Up to four unique User Names can be created. To assign a User Name follow these steps:

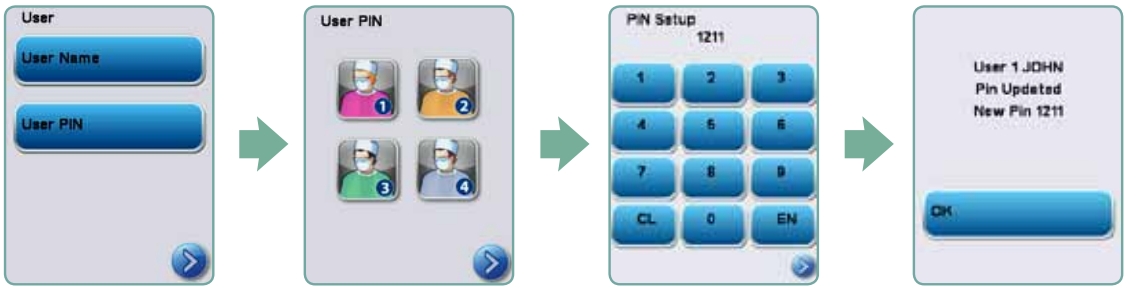
1.
2. Scroll to **User** and select.
3. To assign a user name, select **User Name** and use the alphabetic keypad to enter a name (up to 12 characters) and press **EN** to save.



1.24 Creating a User PIN

From the User PIN screen, you can assign up to four PINs. To assign a PIN, follow these steps:

1.
2. Scroll to **User** and select.
3. To assign a user PIN, select **User PIN** and use the numeric keypad to enter a number (up to 4 digits) and select **EN** to save and to move to the confirmation screen.



5. If all of the information presented in the confirmation screen is correct, press OK to be returned to the User PIN screen. To make a correction, select the User PIN you want to change and repeat the process described above.

1 Introduction

1.25 Setting up process enforced usage

When process enforced usage is activated, users are required to enter a PIN at the end of a cycle. For process enforced usage to function, User IDs and PINs must first be assigned. To set up User ID and PINs, refer to sections 1.23 and 1.24 on creating a user name and PIN. To activate process enforced usage, follow these steps:

1.

2. Scroll to **Process Enforced** and select.

3. Use to toggle process enforced function ON or OFF. Press to save your selection and return to the Setup menu.

! **NOTE:** Any user can stop a cycle even with process enforced usage ON. However, the cycle data will record that an unauthorized user has stopped the cycle.

1.26 Connecting to a network

The HYDR*/M* C61wd G4 has a 10/100Base-T Ethernet port located at the back of the unit. To connect your HYDR*/M* to a network using a router, follow these steps:

1. Connect your network cable to the Ethernet port at the back of the unit. If your office uses a router, the router should automatically assign the unit an IP address. A red X on the network icon means the unit is not connected. A yellow check mark means the unit has an IP address but is not connected to the Internet and cannot send emails. A green check mark means the Internet connection is set up properly and the unit can send out emails.

! **NOTE:** In some circumstances, where you do not have a router, for example when using Windows Network Sharing, you may have to assign a dedicated or 'static' IP address. To assign a static IP address, contact your local network administrator.

2. From the main screen, press the Network icon. The Network screen displays information about your HYDR*/M*'s connectivity, including its IP address.

3. Type the IP address displayed on the touchscreen into the browser of any web enabled device to access your unit's web portal. When the Network icon is active (for example when sending email) it will turn green.

NOTE: Use QR code if connecting to a mobile device.

NOTE: Connection time will vary depending on your network speed, and making an initial connection can take longer.

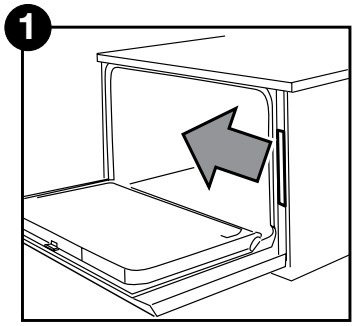
1.26 Connecting to a wireless network

The HYDR*IM* can be configured for wireless use by connecting the Ethernet port to an external wireless bridge / access point. SciCan currently recommends the use of the D-Link® DAP-1522 Xtreme N® Duo Wireless Bridge. Contact your network administrator to learn more about setting up a wireless bridge.

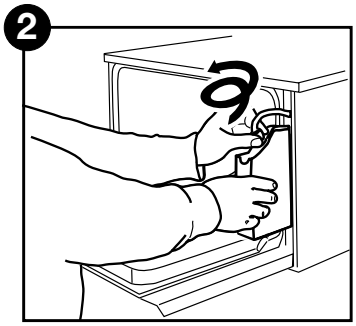
2 Routine Procedures and Maintenance

2.1 Replacing the HIP™ Ultra cleaning solution

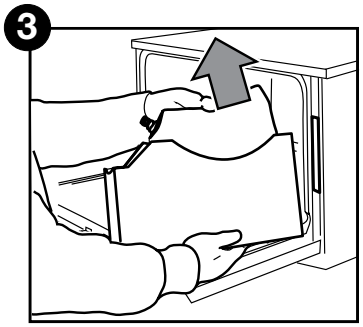
To replace the cleaning solution, follow these steps:



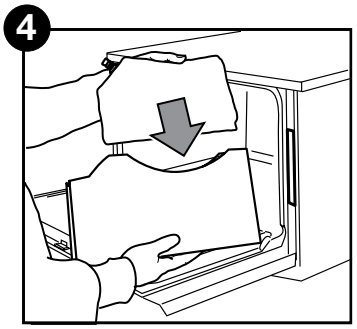
Turn the power OFF, open the door and pull out the chemical drawer.



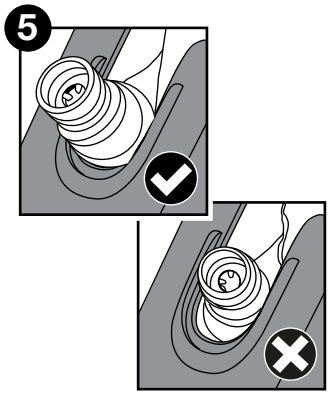
Disconnect the cleaning solution connector.



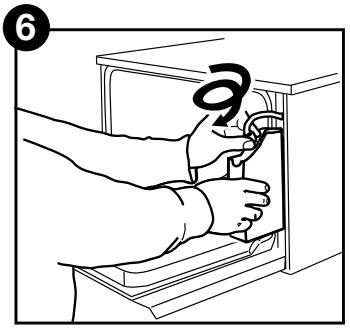
Remove the empty cleaning solution bag and discard or recycle it.



Place a new bag in the chemical drawer.



Ensure the nozzle is in the correct position.



Connect the new bag, close the door and power ON the unit.

To prime the cleaning solution dosing pump, press the water softener/detergent icon on the main screen. In the water softener/detergent screen, press the red X next to “Detergent”. The unit will prime the dosing system and a green check mark will appear in place of the red X when it is ready for use.

NOTE: The system can also be primed by simply starting a cycle and selecting “Detergent Replaced”, when prompted.

NOTE: A cycle will not start with the red X next to the “Detergent” indicator.

2 Routine Procedures and Maintenance

2.2 Changing the air filter and bacteriological filter (if fitted)

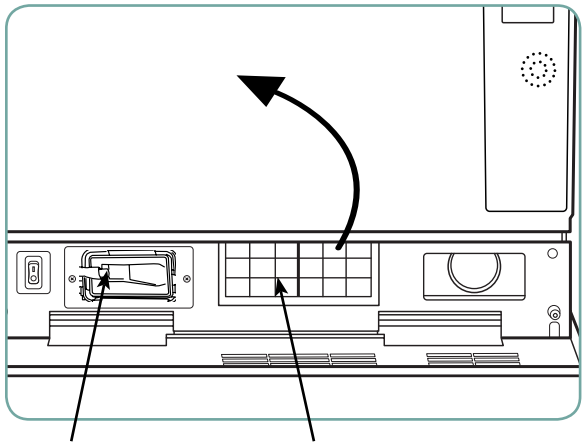


Figure 5

When the message “Replace air filter” appears, the HEPA filter is in need of changing.

1. Turn the power off.
2. Pull open the ventilation panel below the front door of the unit.
3. Make note of the direction of the arrow and remove the old filter by pulling it from the centre.
4. Install the new air filter – placing the arrow in the correct orientation – and close the ventilation panel.
5. After replacing the filter, go to the “Reset Drying Counter” screen in the Setup menu and reset the drying counter to zero. (See Section 1.14)

The filter must be replaced every 750 drying cycles. The unit will continue to run if the filter is not replaced, but you will notice less than optimal drying performance.
Spare part#: 01-113277S Filter-Air, C61

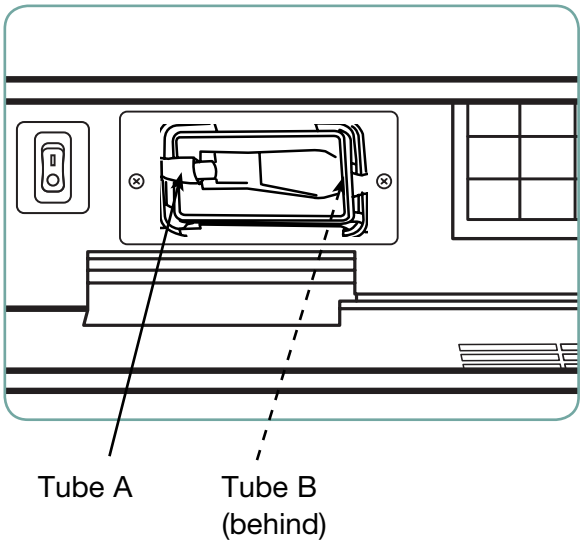


Figure 6

Bacteriological filter

Models fitted with a lumens cleaning system (LCS) have a biological filter that must be replaced every 500 cycles or if dirty. To change the biological filter, follow these steps:

1. Power the unit OFF and disconnect tube A from the bacteriological filter and remove the filter from the filter bracket.
2. Note the orientation of the arrow mark on the filter before removing. When the filter is free of the bracket, carefully disconnect tube B from the back of the filter.

3. Before installing the replacement bacteriological filter (SciCan order no. 01-102119S) check that the arrow mark on the filter matches the direction of the arrow on the bracket. Push the right hand filter fitting into tube B.
4. Gently press the replacement filter into the filter bracket. The arrow mark of the filter should be facing out and pointing to the right.
5. Re-connect tube A to the left hand filter fitting.
6. After replacing the filter, go to the "Reset LCS Counter" screen in the Setup menu and reset the LCS counter to zero. (See Section 1.15)

2.3 Filter and wash arm maintenance

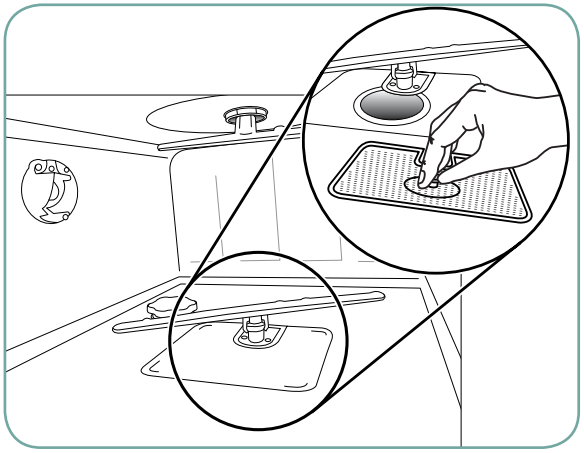


Figure 7

Cleaning the chamber's coarse and fine filters

Inspect the coarse and fine filters in the bottom of the chamber daily for debris and clean if necessary. To clean, remove the filter (turn the metal nut at the centre front of the filter to release it), rinse under a tap and reassemble. Ensure that the filter is firmly locked into position when replaced.

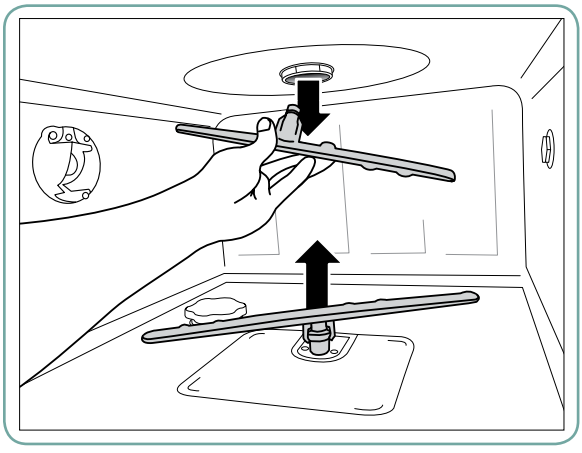


Figure 8

Removing and checking the wash arms

If you see that the wash arms are not turning easily, remove them. Both the upper and lower arms are pressure mounted.
To remove the upper arm, pull down and to remove the lower arm, pull up. Rinse under a tap, clear obstructions from outlet holes and reassemble.

2 Routine Procedures and Maintenance

2.4 Cleaning the chamber

The HYDR*IM* C61wd G4 chamber can be cleaned using the “Cleaning” program in the User menu. This cycle is used to periodically remove hardwater deposits from the chamber walls and racks. Pour 0.5 litres of vinegar into the chamber before starting the cycle. From the User menu, select “Cleaning” and a cleaning cycle, similar to a normal wash cycle, will run. The user will be prompted to clean the chamber every 25 cycles. Reminder frequency can be changed to 25, 50, or 75 cycles. To do this, enter the Technician menu.

2.5 Draining the unit for service or shipping

To drain the unit prior to shipping, or before tipping it onto its back for servicing, run the “Prepare for Shipping” cycle. Once complete, drain any water remaining in the air gap using the silicone tube located under the centre of the unit’s kickplate.

2.6 Upgrading the firmware

Instructional videos are available on http://updates.scican.com

Upgrading the Interface Software can be done from a USB drive, a MicroSD card or a web site. The easiest and fastest method is to use a USB drive.

To upgrade the firmware using a USB drive, proceed as follows:

1. Download new firmware. The firmware will be made available on updates.scican.com or emailed from SciCan upon request. It will be packed into a zip file (e.g. SL00R1XX.zip is the name of the current revision file, but the number will change with every revision) and must be extracted to a USB drive.
2. Check that you have the following files on the USB Drive:
   - firmware.ini
   - Firmware (Folder)
   - SL00R100_4_100_CAA29608.sci
   - cp.bat
3. With the unit powered OFF, insert the USB drive loaded with the firmware update.
4. Power ON the unit. The firmware will be updated automatically using the USB drive. This should take approximately 6 minutes.

   ! **NOTE:** The USB icon on the LCD touchscreen will flash green while it is active. Do not remove the USB key while it is active.
5. When it is complete, the “Firmware.log” file on the USB drive will include the result of the upgrade (file name, upgrade OK, or upgrade failed, and for what reason).
6. Whether the upgrade is successful or unsuccessful, the “firmware.ini” file on the USB drive will be automatically deleted.

7. To retry or upgrade another unit, insert the USB drive into the PC's USB port (**NOTE** there is currently no Mac version) and double-click the "cp.bat" file in the Firmware folder. Then remove the USB drive and repeat Steps 2 to 5.

2.7 Using the HYDRIM remote access function

Users can allow offsite technicians to remotely access the LCD touchscreens and web portals of HYDR*IM* C61wd units connected to a network. This can be done either from within a network or from outside a network.

From within a network:

For local network remote access, the unit must be connected to a network. See Connecting to a network in section 1.26 of this manual for more details. From the unit's web portal, proceed as follows:

From the TOOLS page, click on the LOCAL CONTROL tab.

Log in using the following credentials:

Username: scican

Password: s23can173

Click on the start button to start a local connection. It will open up a page that mirrors the HYDR*IM* unit's touchscreen so that it can be controlled remotely within a local network.

From outside a local network:

For remote access of a HYDR*IM* web portal or touchscreen from outside a local network, proceed as follows:

1. Someone onsite with the unit or from within the network must provide access to an outside user by generating a 'token' (or access code).
2. To generate a unique token using the web portal, go to the TOOLS page and click on the REMOTE ACCESS tab.
3. To generate a unique token using the unit's LCD touchscreen, go to the SETUP menu and scroll to REMOTE ACCESS and follow the prompts to enable remote access.
4. The technician attempting to access the unit from outside the network will need to go to the following URL: http://updates.scican.com and enter their registered email address, password, token and HYDR*IM* Serial Number (optional).
5. To create a new account to enable remote access for a HYDR*IM*, click on the CREATE NEW ACCOUNT link, complete the form, and click on the SUBMIT FORM link. The system will send a confirmation email to verify the account. Once confirmed, the account will be ready to use.

6. Use the valid user name and password to enter Updates.scican.com and enter the token when prompted. This will bring you to the HYDR*/M* unit's web portal page.
7. Click on SETUP. A username and password prompt will appear. Log in using the following credentials:
   - Username: scican
   - Password: s23can173
8. Upon authentication, go to TOOLS and click on REMOTE ACCESS. Click on the start button to start a connection. It will open up a page that mirrors the HYDR*/M* unit's touchscreen so that it can be controlled remotely from outside its local network. Use your mouse to click and select touchscreen elements.

2.8 Annual Service Requirements

The HYDR*/M* C61wd G4 is designed to be maintenance free; however, it is recommended that a SciCan-approved service technician perform an annual check.

Installation, commissioning, annual servicing MUST be undertaken by SciCan approved technicians. Failure to maintain this equipment may invalidate the results of the following testing regime.

The recommended periodic testing protocols are listed in the table below:

When	Who	What Tests
Upon installation	By a SciCan-approved technician	• Commissioning/Installation testing as outlined in the installation document included with the unit. • First validation if required by local regulations.
Daily tests and checks	By the user	• door lock check • wash arm rotation check • door seal check • load carrier check • check and clean chamber filters • visual examination (inspection under magnification) of each load for residual soil.
Annually	By a SciCan-approved technician	• Annual maintenance schedule as outlined in the service manual
Bi-Annually	By a SciCan-approved technician	• Re-validation if required by local regulations.

2 Routine Procedures and Maintenance

The following checks are recommended in order to maintain optimum performance of the unit.

Annual service schedule

- Check integrity of incoming and outgoing services (power, water supply, drain)
- Check water supply in line filters and clean as appropriate
- Check general condition of machine
- Replace dryer filter and reset dryer counter (only if required)
- Inspect and replace main chamber seal (only if required)
- Inspect and replace lower door seal (only if required)
- Check solution container connection for leaks
- Check salt level and replenish as required
- Check water hardness (test strips) and adjust salt regeneration settings if required.
- Inspect and clean sump filters (check sump for debris)
- Check wash arms for blockages and remove them for cleaning if required.
- Review error history
- Software upgrade (if necessary)
- Check individual component functionality. Go to the technician menu (enter access code 7919) and select ‘Diagnostic Tools’ then select ‘Component Tests’. From here you can scroll through and check the functionality of the following components:
    - Cooling fans
    - Air gap pump
    - RO valve (if fitted)
    - Condenser valve (if fitted)
    - Chamber heater
    - Door latch
    - Salt regeneration valve
    - Dosing pump
    - Dryer
    - Hot water valve
    - Cold water valve
    - Air solenoid valve (if fitted)
    - Waste pump
    - Recirculation pump
- Check program selection

- Check that dosing pump is dispensing. To verify:

  1. **code 7919**
  2. Scroll to **Diagnostic Tools** and select. Then scroll to **Component Test** menu.
  3. From this menu, scroll to **Dosing Pump** and select ON. The dosing pump will be activated and the predefined number of pulses will be dispensed (the screen will display a countdown counter).
  4. With the door open, check to see if the detergent is dispensing.

     NOTE: The dosing pump is pre-calibrated and the volume cannot be adjusted. Selecting the OFF button on this screen will activate the chemical reservoir filling pump. This pump will automatically stop when the chemical reservoir level switch is activated.

- Check thermocouple calibration. To calibrate:

  1. **code 7919**
  2. Scroll to **Diagnostic Tools** and select. Then scroll to **Set Calibration** and select.
  3. From **Set Calibration**, press or to enable Calibration.
  4. Insert external temperature reading device into sump of HYDRIM and close door.
  5. Run P3 / P4 / P5 Disinfection cycle. When the temperature sensor reaches 90°C use on the touchscreen to match the values displayed on the external temperature reading device

     IMPORTANT: All local, regional, state and national regulations regarding the servicing of this class of device and safety requirements must be observed.

- Reset the service counter.

  1. **code 7919**
  2. Scroll to **Preventative Maintenance** and select. Then scroll to **Reset Service Counter** and select.

- Clean machine
- Conduct electrical safety tests (hi-pot and ground continuity)

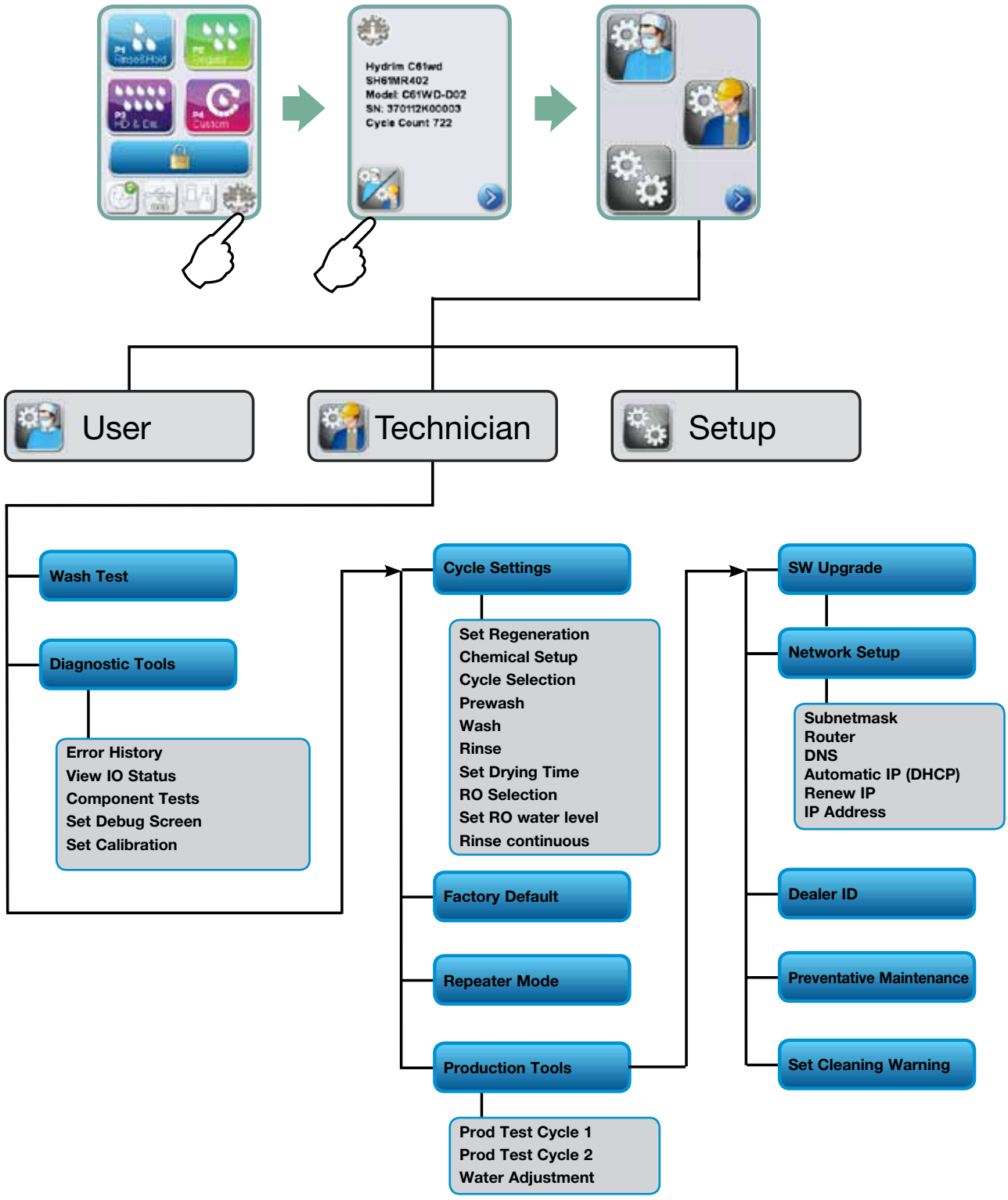
Equipment and parts requirements for annual service

- Dryer filter (HEPA) (Part number 01-113277S)
- Main chamber seal (Part number 01-113300S)
- Lower door seal (Part number 01-113661S)
- Service Manual (Part number 95-113588)
- Electrical safety test equipment
- Water hardness test strips (Part number 01-108305S)
- Calibrated independent temperature measuring device
- 100ml graduated measuring cylinder

3 Diagnostics and Troubleshooting

3.1 Using the service menu

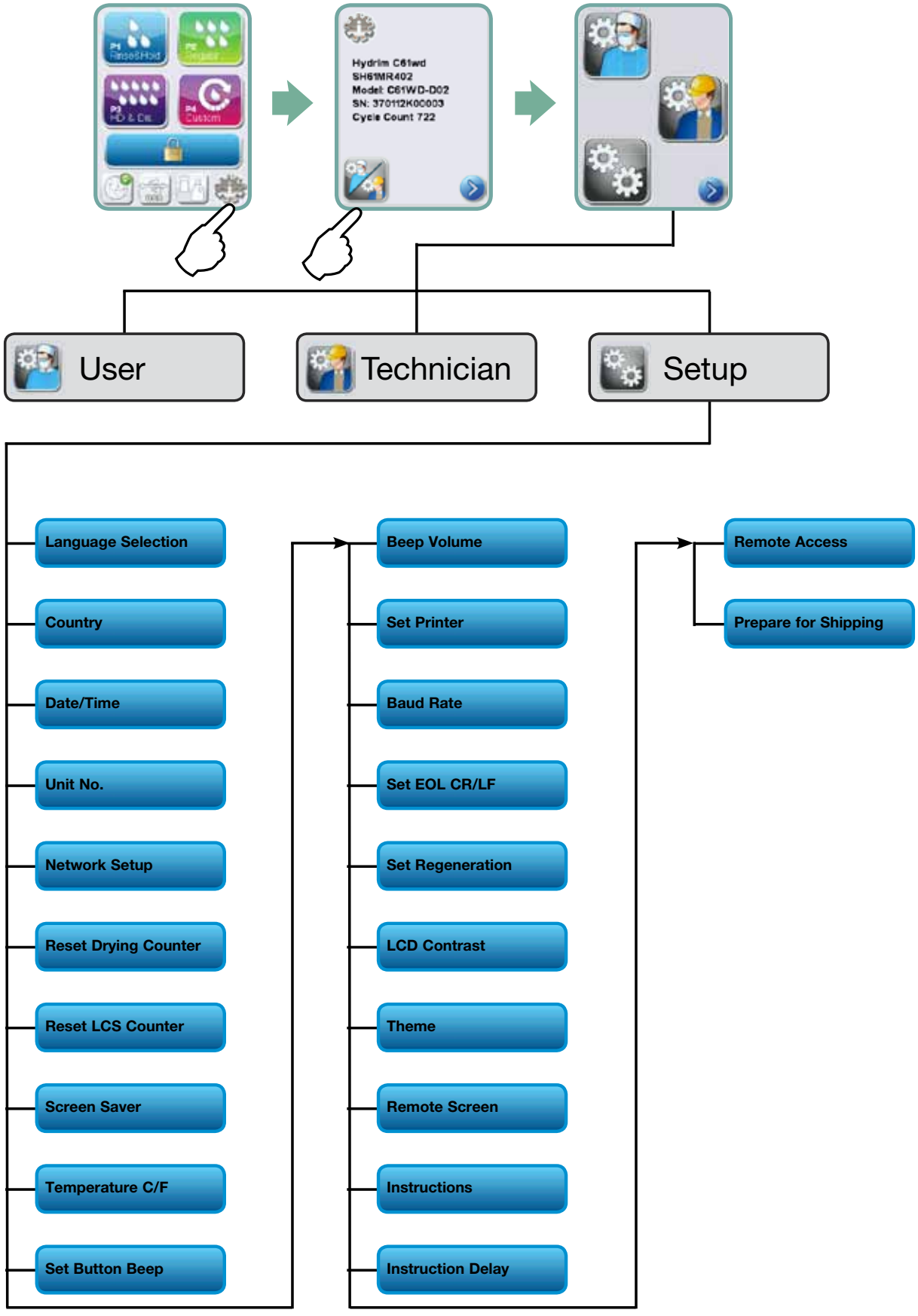
To access the service menu, select the image of the technician and enter the service code 7919 on the keypad.



3 Diagnostics and Troubleshooting

3.2 Using the setup menu

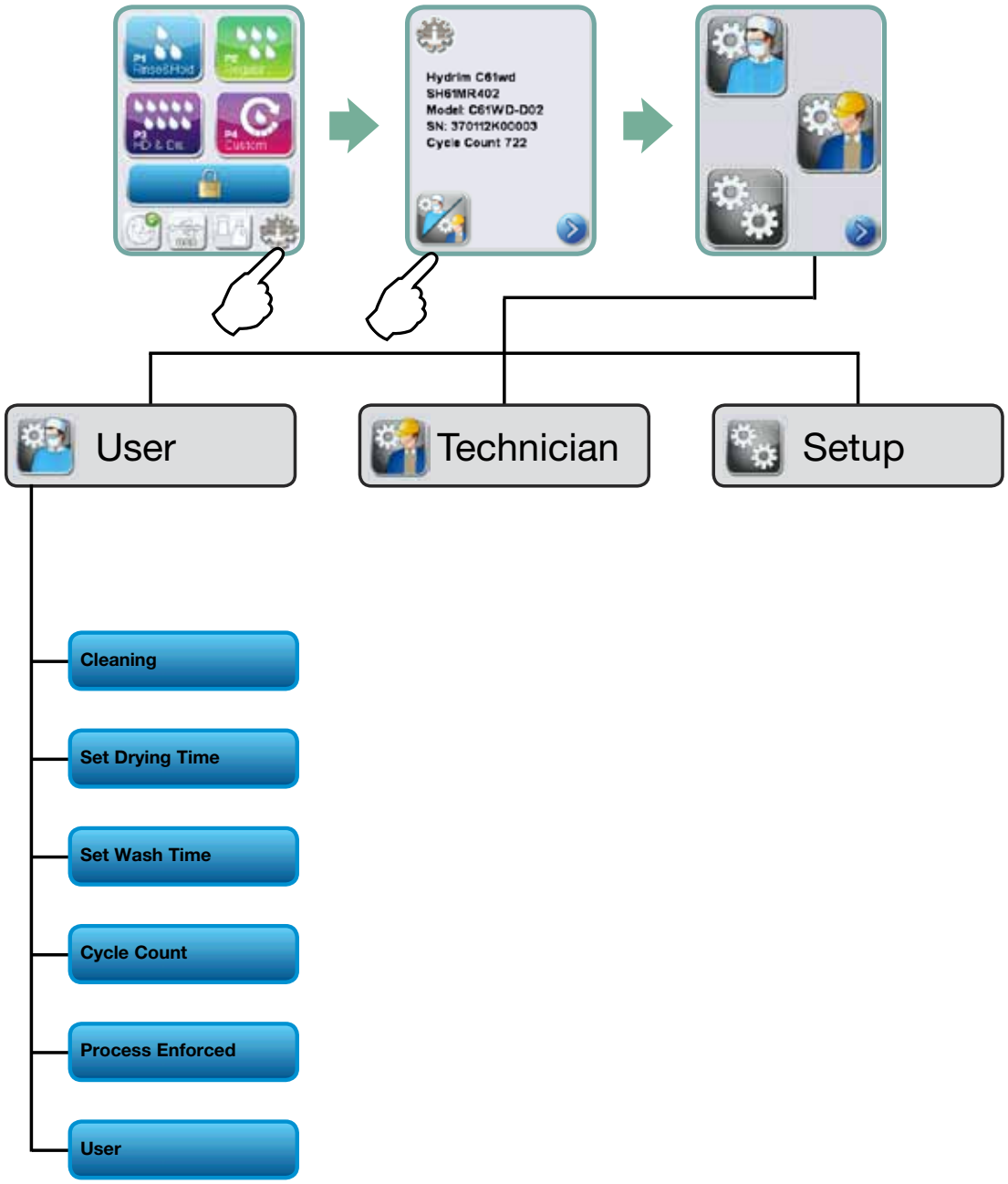
To access functions and settings on the setup menu, proceed as follows:



3 Diagnostics and Troubleshooting

3.3 Using the user menu

To access functions and settings on the user menu, proceed as follows:



3 Diagnostics and Troubleshooting

3.4 Using software tools for diagnostics

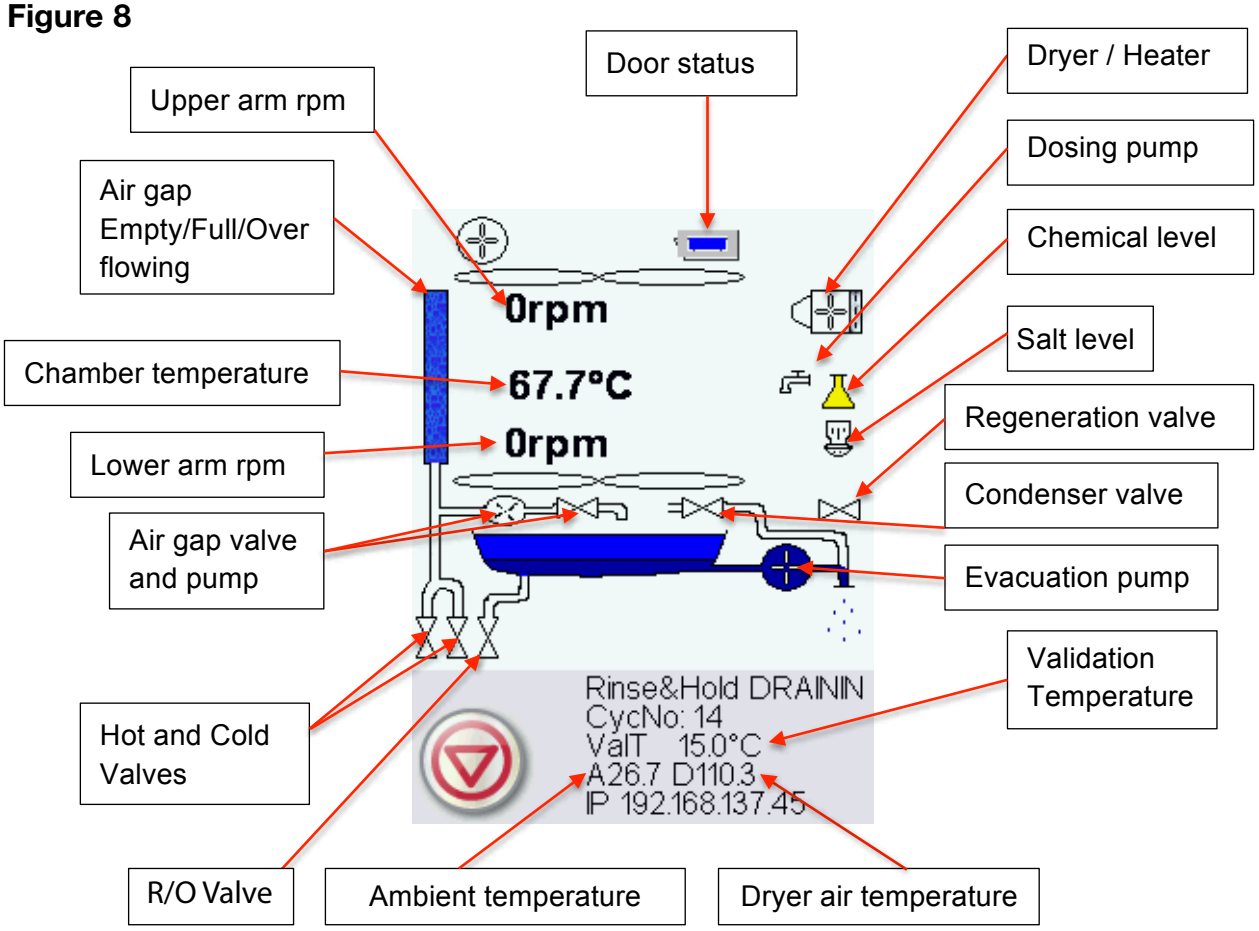
Within the service menu, there are two useful tools for troubleshooting: Debug screen and IO status screen.

Debug Screen

The Debug screen is used when running a cycle to view the I/O status of components.

To access the debug screen, select Diagnostic Tools from the service menu and select Set Debug Screen, then go to the main menu and select a cycle. The LCD screen will display the following:

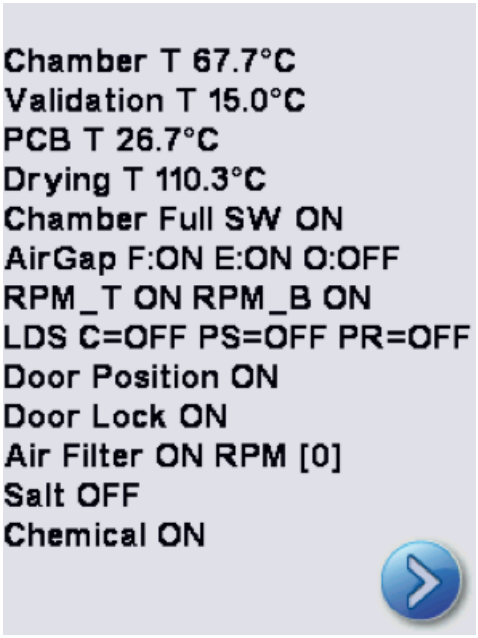
Figure 8



NOTE: When a cycle is started (P1, P2, P3) the air gap is filled four times before the circulation pump starts.

I/O status screen

The IO status screen is used when testing components and wires for functionality without the cycle running.



3 Diagnostics and Troubleshooting

3.5 Troubleshooting cycle faults

Cycle Fault	Effect	Problem	Possible Causes
CF 1 Water Heating Failure	Improper wash, cycle aborted	Chamber temperature less than a set point after a timeout, or a temperature increase rate of 1°C per 2 minutes was not achieved during "Circulation and heating" phase	This is caused by a water heater malfunction: • Check water heater wire harness for loose contacts. • Check for open thermal cut-off switch due to high temperature. • Check that the heater element is not interrupted. • Check I/O PCB water heater relay output.
CF 2 Chamber Filling Failure	Improper wash, cycle aborted	Timeout on filling up the chamber	• Water supply issue • Water valves failure • Air gap water pump failure • Air gap valve failure • Air gap Full/Empty level switches failure • Chamber water level pressure switch malfunction • Overflow switch malfunction triggering evacuation pump.
CF 3 Chamber Temperature Reading Failure	Improper wash, cycle aborted	Temperature reading outside acceptable range for primary or secondary sensor	This is caused by a temperature sensor malfunction: • Check temperature sensor wires for loose contacts. • Replace sensor with a good one and verify if the CF persist. • Replace I/O PCB.
CF 4 Water Evacuation Failure	Cycle interrupted	Timeout on water evacuation from the chamber	• Blocked drain tube • Chamber water level switch malfunction • Chamber water evacuation pump failure • Drain pump priming connection hole in the sump blocked

3 Diagnostics and Troubleshooting

Cycle Fault	Effect	Problem	Possible Causes
CF 5 Disinfection Failure	Cycle interrupted	Temperature dropped below target temperature during the disinfection phase.	The chamber or the validation temperature sensor is malfunctioning or the water heater cannot maintain the disinfection temperature: • Check calibration • Verify temperature sensors • Verify water heater • Verify I/O board (hardware failure)
CF 7 Cycle Aborted or Interrupted	Cycle interrupted	Stop button pressed or power failure	• Cycle aborted due to loss of power
CF 8 Air Heater Failure	Drying aborted	Air temperature less than a set point after a timeout	This is caused by a heater malfunction: • Check air heater wire harness for loose contacts. • Check that the heater element is not interrupted. • Check I/O PCB air heater relay output.
CF 9 Program Timeout	Cycle interrupted	The unit is running a cycle for more than 3h ±3 min.	• Defective PCB and/or software failure • Replace Color LCD controller.
CF 10 Drying System Error	Cycle interrupted	Air Dryer RPM not zero when Dryer motor should not be activated	Electronics – motor driver failure (I/O board) • Check Dryer motor wiring. • Verify that motor stops when in non drying phase. • Replace I/O board. • Replace dryer motor.

3 Diagnostics and Troubleshooting

Cycle Fault	Effect	Problem	Possible Causes
CF 12 Water Filter Clogged (for models equipped with LCS only)	Cycle interrupted	Problem with Lumens Cleaning System	• Check that LCS adaptor is properly seated in chamber. • You selected LCS at program start but LCS is not installed • Replace water filter: Unscrew end cap from the LCS handpiece adapter to remove/ replace water filter.
CF 13 Temperature Validation Error	Cycle interrupted	Water temperature rose above the maximum allowed temperature	The temperature sensor out of range: • Check temperature sensor wires for loose contacts. • Run cycle to monitor that the water temperature is below 96°C. • Replace sensor and verify if the CF persist. • Replace I/O PCB.
CF 14 Water Too Hot	Cycle interrupted	During the Prewash phase the water temperature in the chamber is 5ºC higher than the target for more than 1sec	• Check water connections. • Ensure hot and cold water inlets are not swapped.
CF 15 Water Reservoir Overflow	Cycle interrupted	Leak in the unit	The water reservoir overflow switch was triggered: • Check the water reservoir full switch.
CF 16 Ambient Temperature Error	Cycle interrupted	Operating temperature for one or both logic boards is too high	The room or enclosure is too warm and not allowing the unit to adequately cool: Check that fans are working.
CF 17 Drying Error	Drying system overheated	Drying Air temperature above a set point	The air temperature in the air duct is too high: • Check dryer motor. • Verify that the air heater is not always ON. • Verify air temperature sensor. • Verify I/O PCB.

3 Diagnostics and Troubleshooting

Cycle Fault	Effect	Problem	Possible Causes
CF 18 Water Filter Pressure Sensor Stuck (for models equipped with LCS only)	Cycle interrupted	Problem with Lumens Cleaning System	Pressure switch is stuck: • Verify LCS pressure sensor (stuck) • Verify LCS wiring • Check I/O board (hardware failure)
CF 21 Dosing System Error	Dosing System failure Cycle interrupted	Dosing system failed to dispense the preset amount in a predefined time (timeout is 3.5s/ pulse). Dosing reservoir level switch does not change from Full ON to OFF by the end of dosing (no chemical dispensed)	Dosing pump or switch error: • Verify bellows dosing pump • Verify bellows dosing pump switch
CF 22 Air Temperature error	Cycle cannot start or cycle interrupted	Ambient temperature sensor broken	Temperature sensor reading error: • Check air temperature sensor wires for loose contacts. • Replace sensor with a good one and verify if the CF persist. • Replace I/O board.
CF 23 Top Wash Arm RPM error	Cycle interrupted	Top RPM lower than 10 while washing or disinfecting	• Instrument blocking upper wash arm • Chamber water level too low • Water pump failure
CF 24 Low Wash Arm RPM error	Cycle interrupted	Low RPM lower than 25 while washing or disinfecting	• Instrument blocking lower wash arm • Chamber water level too low • Water pump failure
CF 25 Vref Error	Cycle cannot start or cycle interrupted	Vref and VCC drift, post CF 25 if VCC and Vref are more than 3% apart (power supply error)	The power supply 5V output voltage is fluctuating: • Check power supply 5V output. • Replace I/O board.

3 Diagnostics and Troubleshooting

Cycle Fault	Effect	Problem	Possible Causes
CF 26 Air Valve error	Cycle interrupted	Problem with air pressure in air line	The air valve is malfunctioning: • Verify air valve (stuck). • Check Verify I/O board (hardware failure).
CF 27 Memory Error	Hardware failure	Color LCD control board failure	The internal memory of the Color LCD Controller is malfunctioning: • Replace Color LCD controller board.
Touchscreen is blank/ white			Check power source
USB storage device does not contain the last print out			Re-insert the USB storage device and wait for the data to copy over again. If problem persists, back up all the information on the USB device and reformat it. **NOTE:** the web portal allows access to all of the unit's cycle information.
Unit is not sending emails			Check email settings by using the TEST button on the unit's web portal. From the SETUP web page, select the TOOLS tab. Click on TEST to check your router, unit, and Internet connections. If all settings appear to be OK. Go to the unit's touchscreen and renew the IP address by following these steps: 1. Scroll through the setup menu to NETWORK SETUP and select. 2. Select RENEW IP.
Not receiving emails from the unit			Check user's spam filter. Be certain the unit has been identified as an accepted email source.

4. Removing and Replacing Panels

WARNINGS AND PRECAUTIONS

If you have questions about the unit you are repairing, please do not hesitate to contact your local SciCan representative for information. Also, the HYDR*IM* is heavy. Exercise caution and seek assistance when lifting or carrying units.

EXERCISE CAUTION

- Hazardous voltages are accessible when the cover is removed.
- Disconnect the power cord before servicing the power mains portion of the controller board and associated devices.
- Removing the panels will expose some sharp metal edges. Be careful and wear long sleeves and gloves.

PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
- A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.
- A protective bonding impedance test (ground continuity) must be performed on the unit if components of the protective earthing system are changed or if connections are broken and remade.

PROTECT THE UNIT

- The HYDR*IM* contains electronic circuitry that is static sensitive. Always wear a static strap when working with or near printed wiring boards. In addition, use static footstraps, grounding mats and grounded work surfaces when servicing microprocessor devices. Transport boards and devices in static protected bags.
- In order to ensure adherence to the applicable safety agency approvals, state, provincial, regional and national laws, replace components with SciCan approved parts only.

4. Removing and Replacing Panels

4.1 Removing and reinstalling the top panel

1. Open door to remove 3 screws under the top cover's front edge. (Figure 9)
2. Pull top cover to the front and tip up to remove.

To reinstall, place the cover on top of unit and slightly forward. Push it to the back to engage the tabs. Replace 3 screws at the front.

Top panel – part # 01-113286S

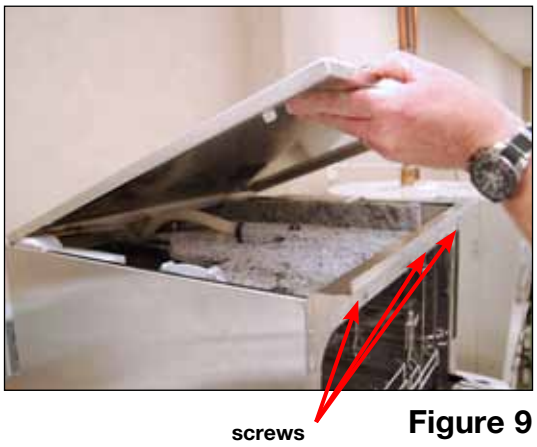


Figure 9

4.2 Removing and reinstalling the left panel

1. Remove top cover.
2. Open front door to remove 4 screws in the front. (Figure 10)
3. Remove 3 screws on back of unit. (not shown)
4. Tip the panel back and slide it down to disengage the two tabs that insert into the chassis at bottom.

To reinstall, bring the panel into position slightly lower than the unit to be able to engage the two bottom tabs and the one at the top. Slide it up into place and replace 4 screws. Replace the top cover.

Left side panel – part # 01-113288S

Figure 10

4. Removing and Replacing Panels

4.3 Removing and reinstalling the right panel

1. Open the door to remove 3 screws in the front. (Figure 11)
2. Remove 3 screws at the back of the unit. (not shown)
3. There are 2 tabs at the bottom of the panel. To disengage these from the chassis, pull the panel out from the top and slide it down.

To reinstall, bring the panel into position slightly lower than the unit to be able to engage the two bottom tabs. Slide it up into position and push it into place at the top. Replace 3 screws at the back and 3 screws at the front.

Right side panel – part # 01-113290S

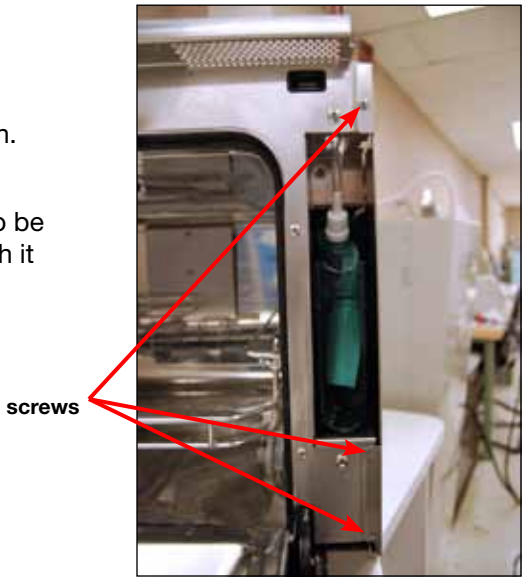


Figure 11

4.4 Removing and reinstalling the back panel

1. Remove 8 screws to release the panel. (Figure 12)

To reinstall, reverse procedure.

Back panel – part # 01-113297S

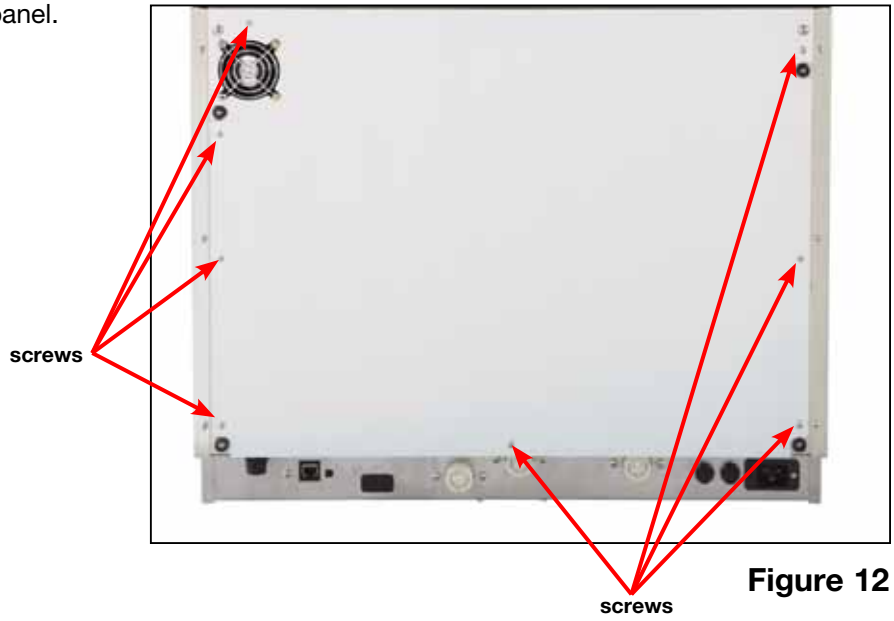


Figure 12

4. Removing and Replacing Panels

4.5 Removing and reinstalling the bottom panel

1. With the unit still hooked up, start by disconnecting the cap from the chemical detergent pouch and then running a shipping cycle from the set-up menu. This will drain most of the water and detergent from the unit.
2. If you cannot run a shipping cycle because the unit is without power, pull the drainage tube out from under the middle of the kickplate and allow it to drain into a waste bottle. (Without power, you may have to manually unlock the door using the door latch.)
3. Remove the coarse filter and sump filter and use an absorbent cloth to sop up residual water from the sump.
4. After draining the unit, turn it off, disconnect the power and disconnect all water connections.
5. Slide an absorbent cloth under the unit to catch any remaining water.
6. Using the two handleholds located at the front under the kickplate, (Figure 13a) pull the unit towards you and tip it onto its back.
7. On the bottom panel there are 2 small rubber standoffs connecting the dryer inlet duct to the bottom panel. Push these through their holes to detach them from the panel. (Figure 13b)
8. Remove 6 screws and slide the panel up to release the tabs from the chassis. (Figure 13c)

To reinstall, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

Bottom panel – part # 01-113296S

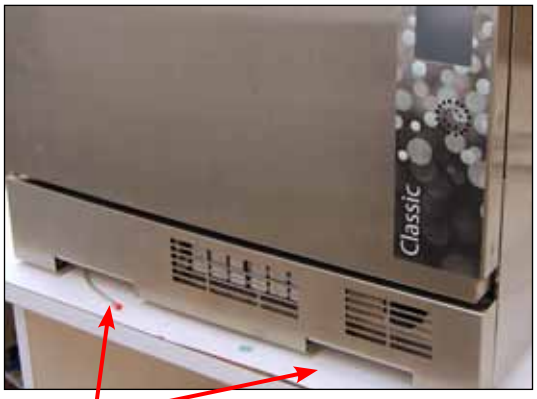


Figure 13a

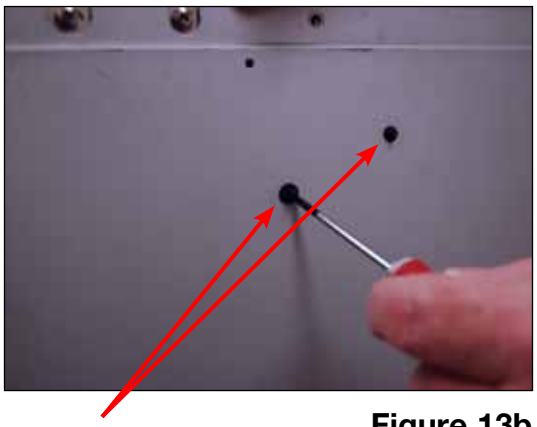


Figure 13b

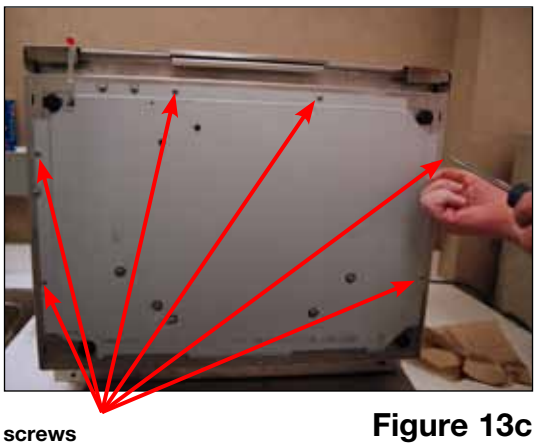


Figure 13c

WARNINGS AND PRECAUTIONS

If you have questions about the unit you are repairing, please do not hesitate to contact your local SciCan representative for information. Also, the HYDR*IM* is heavy. Exercise caution and seek assistance when lifting or carrying units.

EXERCISE CAUTION

- Hazardous voltages are accessible when the cover is removed.
- Disconnect the power cord before servicing the power mains portion of the controller board and associated devices.
- Removing the panels will expose some sharp metal edges. Be careful and wear long sleeves and gloves.

PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
- A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.
- A protective bonding impedance test (ground continuity) must be performed on the unit if components of the protective earthing system are changed or if connections are broken and remade.

PROTECT THE UNIT

- The HYDR*IM* contains electronic circuitry that is static sensitive. Always wear a static strap when working with or near printed wiring boards. In addition, use static footstraps, grounding mats and grounded work surfaces when servicing microprocessor devices. Transport boards and devices in static protected bags.
- In order to ensure adherence to the applicable safety agency approvals, state, provincial, regional and national laws, replace components with SciCan approved parts only.

5. Front Components

5.1 Removing and reinstalling the kickplate

CAUTION: cover sharp edges on the filter cutout with tape to protect hands.

1. Open kickplate and remove HEPA filter. (Figure 14a)
2. Detach the dryer inlet duct by pulling off the HEPA filter gasket and pulling the dryer inlet duct out of the groove so that you can push it free of the kickplate. (Figure 14c, 14d)
3. Unscrew the 2 magnets by hand and remove the 2 screws.
4. Unclip the plastic edge guard at the bottom right of the door and pull the wire harness free of the kickplate.
5. Remove the metal panel between the power switch and the HEPA filter to detach the microswitch wires at right. **NOTE:** If fitted with an LCS system, remove bacteria retentive filter and remove filter housing. (Figure 14b)
6. With the condenser exhaust still attached, support the kickplate door to keep it from falling and pull the kickplate off.
7. Detach the hose clamp on the exhaust duct hose and pull the kickplate free.

To reinstall:

1. Attach the exhaust duct hose using the hose clamp.
2. Attach the HEPA filter microswitch wires and push the kickplate into place.
3. Reattach the 2 magnets and the 2 bumpers with screws.
4. To reattach the dryer inlet duct, pull it through the kickplate and push it back to hook its edges into the grooves at the top and bottom of the dryer inlet duct cutout and over the tabs at the left and right of the cutout. **NOTE:** Be certain the gasket is properly positioned in the dryer inlet duct or replace with a new gasket.
5. Reinstall bacteria retentive filter housing and filter, if unit is fitted with LCS system

Kickplate – part # 01-113292S

Filter gasket – part # 01-113262S

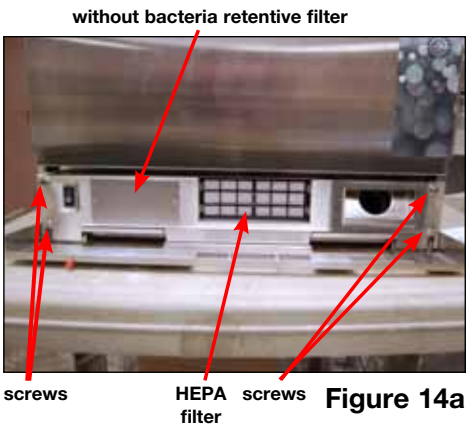


Figure 14a

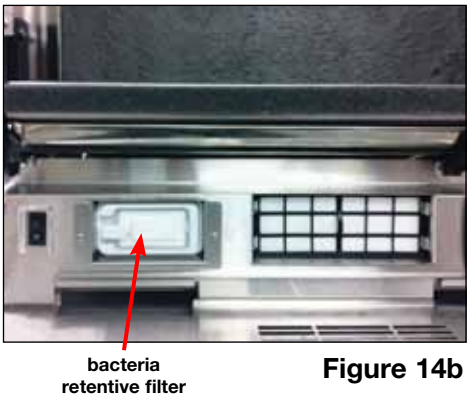


Figure 14b

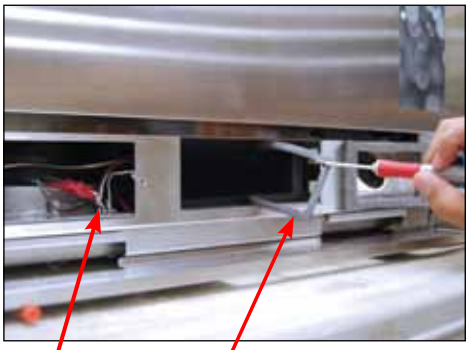


Figure 14c

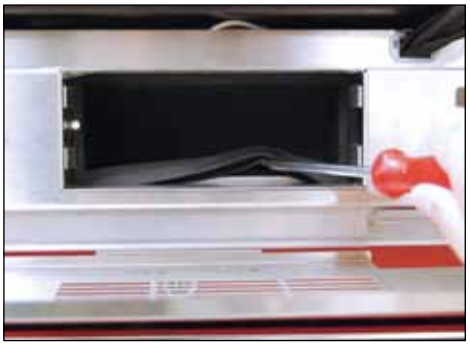


Figure 14d

5. Front Components

5.2 Removing and reinstalling the power switch

1. Remove top cover and left panel.
2. Remove two contacts from the back of the power switch using needle nose pliers. This will help to pull the power switch through the cut out in the chassis. (Figure 15)
3. Carefully pry the switch out using a flat head screwdriver.
4. Remove all the remaining contacts.

NOTE: Switch wire connectors can also be accessed by removing steel plate (filter housing on LCS models) in front of kickplate. (Figure 14a)

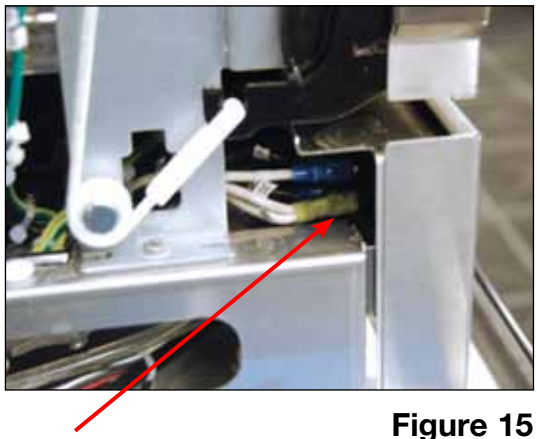


Figure 15

To reinstall:

1. Reattach contacts to power switch according to the table below and push into cut out in chassis.

Power switch terminal position	Corresponding Wire
1	3 BLU
1A	29/30 YEL
2	4 BLU
2A	5 BLU

2. Reinstall left panel and top cover.

Rocker switch – part # 01-112024S

6. Door Components

WARNINGS AND PRECAUTIONS

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PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
- A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.
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PROTECT THE UNIT

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- In order to ensure adherence to the applicable safety agency approvals, state, provincial, regional and national laws, replace components with SciCan approved parts only.

6. Door Components

6.1 Removing and reinstalling the door fascia

1. Open door and remove 3 screws on right side of door, 2 on inside left and 2 on the inside top. (Figure 16a)
2. Slide the door fascia up just enough to disengage it. **CAUTION:** the LCD and controller are attached to the door fascia.
3. Pull it up and out from the top and rest it on the worksurface in front of the unit to access the LCD bracket.
4. Unscrew the two nuts fastening the LCD bracket to the door fascia and lift the bracket out. (Figure 16b)
5. Hook the LCD bracket into its service position on the door (hooks into two slots and one spring lock at right on door). (Figure 16c, 16d)

Figure 16a

Figure 16b

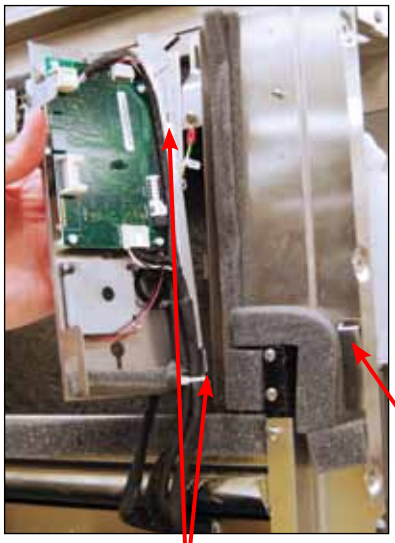

Figure 16c

Figure 16d

To reinstall:

1. Remove the LCD bracket from its service position on the door, place it into position in the door fascia and fasten the two retaining nuts.
2. Bring the fascia into position onto the front of the door and slide it down into place.
3. Replace the 3 screws on the right side of the door, the 2 on the inside left and the 2 on the inside top.

Cover stainless door C61wd part – # 01-113633S

6. Door Components

6.2 Removing and reinstalling the door springs

To remove the left side door spring:

1. Remove top cover
2. Remove left panel.
3. Unhook the door spring to replace. (Figure 17a)

To reinstall, reverse procedure.

Door spring kit – part # 01-113298S
(kit has set of two springs and rope)

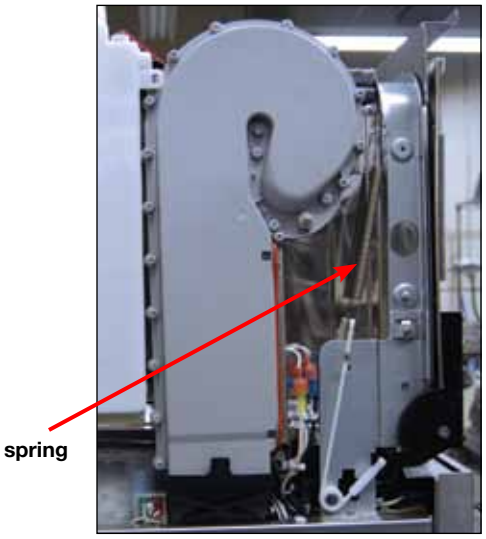

Figure 17a

To remove the right side door spring:

1. Remove top cover.
2. Remove left and right panel. (Left panel must be removed to remove chamber fascia.)
3. Remove 1 screw at rear of reservoir refill pump bracket. (Figure 17b)
4. Remove 6 screws on chamber fascia and remove chamber fascia. (Figure 17c)
5. Loosen 3 screws at base of chemical bracket. (Figure 17b)
6. Slide chemical bracket to rear and tip it back to access right door spring.
7. Unhook the door spring to replace. (Figure 17d)

To reinstall, reverse procedure.

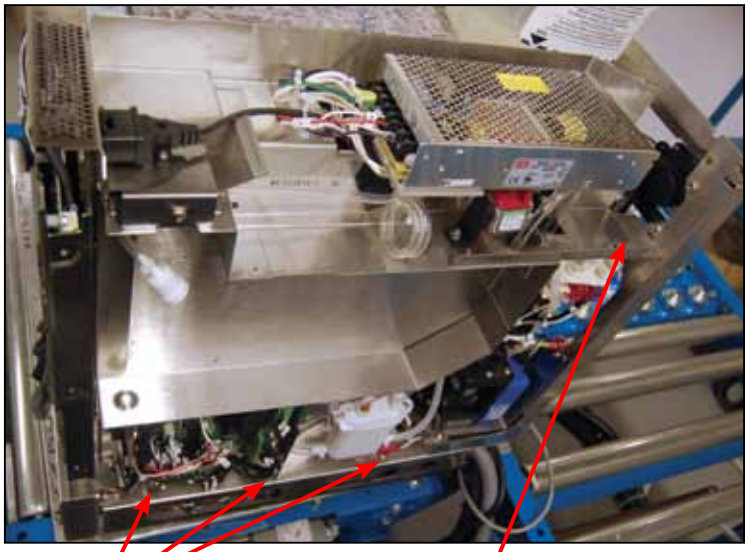

Figure 17b

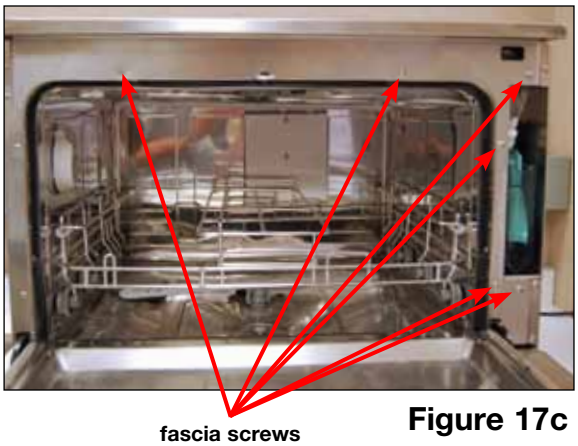

Figure 17c

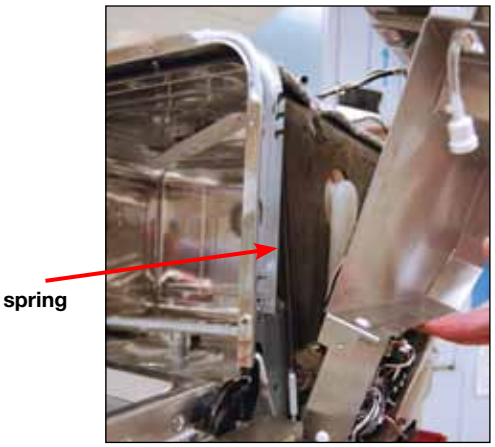

Figure 17d

6. Door Components

6.3 Removing and reinstalling the door

1. Remove door fascia. (See 6.1 Removing and reinstalling door fascia)
2. Unhook LCD bracket from service position. (Figure 18a)
3. Remove door rebar by removing the 2 screws at left and 3 screws at right. Then sliding left side up and slide right side up to bring it up and out of position. (Figure 18b)
4. Remove latch assembly (see 6.7 Removing and reinstalling door latch assembly) but do not disconnect wires.
5. Remove 2 screws on the left inside of door and 2 screws on right inside of door. (Figure 18c)
6. Pull the door out. **CAUTION:** Door edges are extremely sharp.

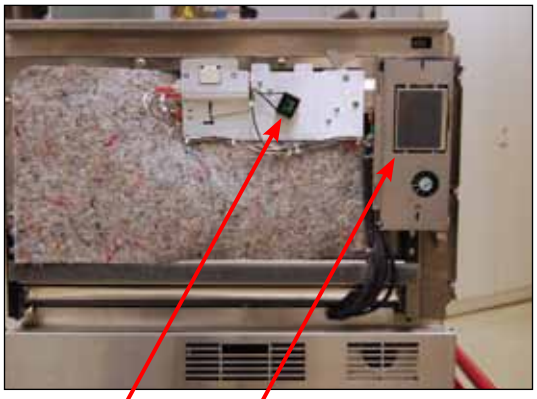

Figure 18a

To reinstall, push the door back into position and fasten screws. Reattach latch assembly, door rebar, and door fascia.

Inner door panel – part # 01-113299S

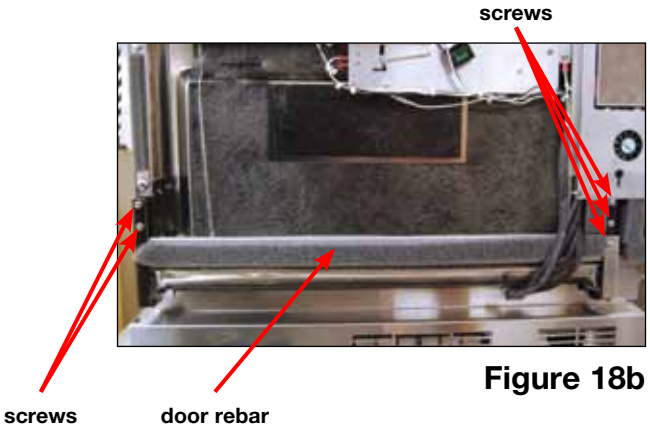

Figure 18b

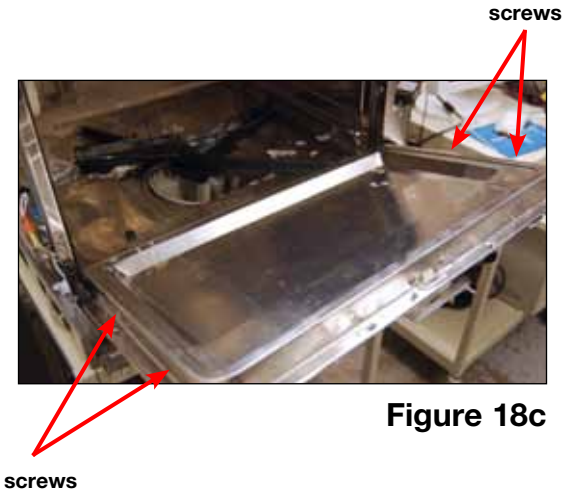

Figure 18c

6. Door Components

6.4 Removing and reinstalling LCD and LCD controller

1. Remove the door fascia to access the LCD. (See 6.1 Removing and reinstalling door fascia)
2. Remove all wire connections from the controller board and cut cable ties affixing the wiring harness to the LCD. (Figure 19a)
3. Remove the retaining nuts on each corner of the board. **CAUTION:** Lift the board gently – it is attached to the LCD by a ribbon cable. (Figure 19a)
4. Flip the board over to expose the ribbon cable latch fastener. Using your fingernail, gently flip up the latch to release the ribbon cable. (Figure 19b)
5. The LCD is affixed to the bracket and (replacement LCD will come attached to bracket).
6. Remove the speaker and fan if replacing the LCD so that these can be used on the replacement LCD bracket.

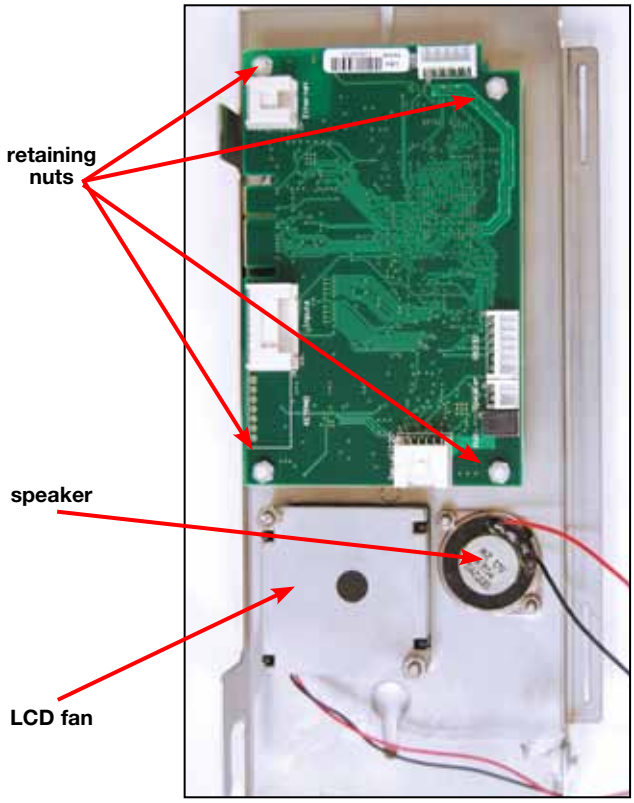

Figure 19a

To reinstall:

1. Place the controller board on a flat surface next to the LCD/LCD bracket and connect the ribbon cable.
2. Reattach the LCD controller board using the 4 retaining nuts.
3. Reattach all the wire connections to the LCD controller board and fasten with cable ties.
4. Reattach the LCD bracket to the door fascia using the 2 retaining nuts.
5. Reinstall the door fascia.

LCD Assembly – part # 01-113311S

LCD Controller C61wd – part # 01-113395S

6.5 Removing and reinstalling the LCD fan (Figure 19a, 19b)

1. Remove the LCD bracket.
2. Remove the 2 screws affixing the fan to the bracket.
3. Remove the fan.

To reinstall, reverse procedure.

Blower – part # 01-113284S

6.6 Removing and reinstalling the speaker (Figure 19a, 19b)

1. Remove the LCD bracket.
2. Remove the 2 screws affixing the speaker to the bracket.
3. Remove the speaker.

To reinstall, reverse procedure.

Speaker assembly – part # 01-113682S

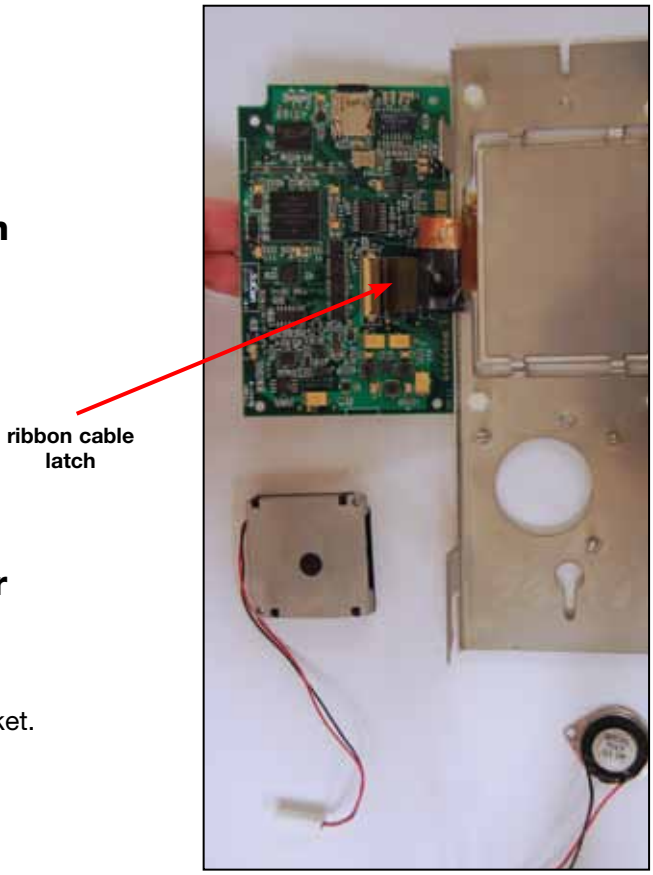

Figure 19b

6. Door Components

6.7 Removing and reinstalling the door latch assembly

1. Remove the door fascia. (See 6.1 Removing and reinstalling door fascia)
2. Remove the 3 screws on the latch assembly (2 screws at inside top of door and 1 at right of assembly). (Figure 20a)
3. Disconnect the wires on the latching microswitch (wires 69, 70), the filter (wires 67, 68), and the door latching solenoid (wires 93, 94). (Figure 20a, 20b)
4. Unstick double-sided tape to remove capacitor, if required.

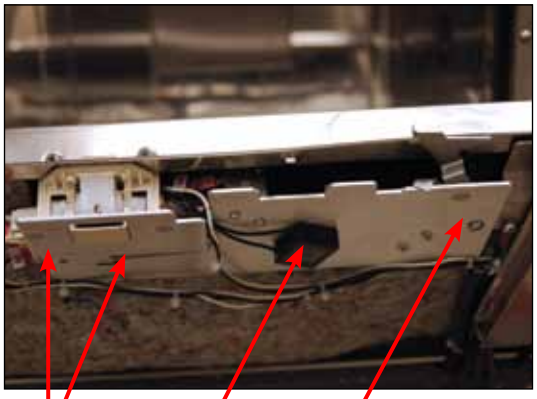

Figure 20a

To reinstall:

1. Reattach all the wires.
2. Re-stick capacitor to door latch assembly.
3. Fasten the 2 screws at the top of the door latch. (**CAUTION:** door has sharp edges)
4. Fasten the 1 screw into bracket at right.
5. Fasten cable ties.

Door latch – part # 01-113322S

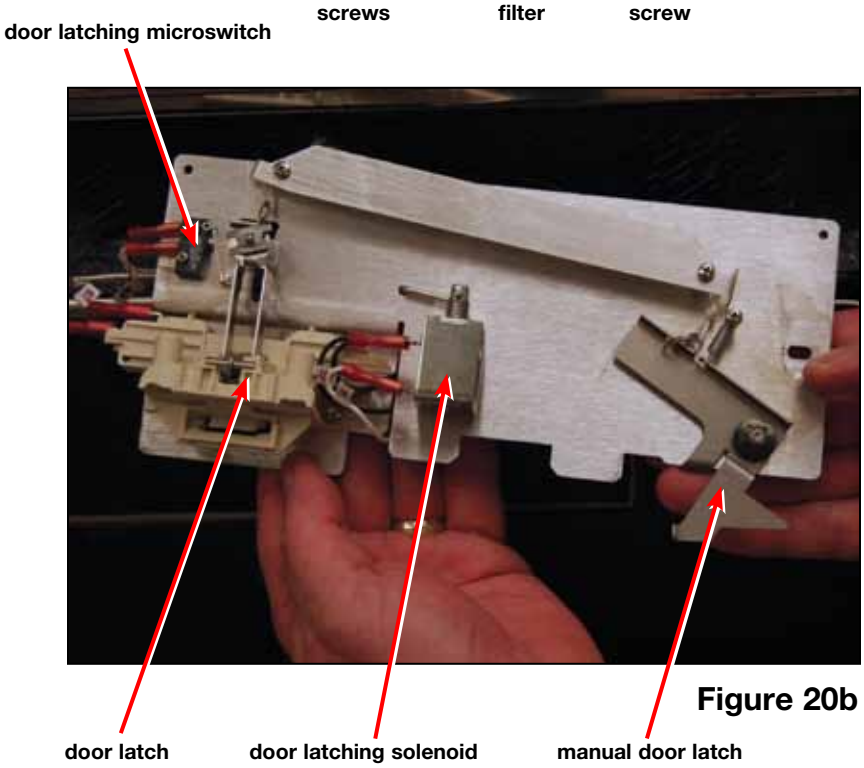

Figure 20b

6.8 Removing and replacing the door microswitch

1. Remove the door latch assembly.
2. Unscrew the 2 screws fastening the door miscroswitch to the door latch assembly and remove.

To reinstall:

1. Replace the door microswitch and fasten with the 2 screws.
2. Reinstall the door latch assembly and door fascia.

Door latch microswitch – part # 01-113605S

6.9 Removing and replacing the door latch solenoid

1. Remove door latch assembly.
2. Remove 2 screws fixing solenoid to assembly.
3. Disconnect wiring. **CAUTION:** connector terminals are delicate. Hold terminals with pliers while pulling connections.

To reinstall, reverse procedure.

Door latch solenoid – part # 01-113319S

6. Door Components

6.10 Removing and replacing the door seal

1. To remove the door seal, open the door, pull the old seal out and remove all silicone residues. (Figure 21a)

Figure 21a

To replace the door seal:

1. Use a silicone sealant to adhere the new door seal to the chamber. Ensure the inside surface is clean and dry and run 2 thick beads of silicone, the width of the new seal apart, from left to right and up the sides to the edges. (Figure 21b)
2. Put one end of the seal into place pushing it firmly up under the door edge, then put the other end into place. Then push the middle section into place ensuring it does not bulge out.
3. Slowly close the door, holding the middle of the new door seal to keep it in position. (Figure 21c, 21d)
4. Allow to dry for 12 hours before use.

Door seal – part # 01-113661S

Figure 21b

Figure 21c

Figure 21d

6. Door Components

6.11 Removing and replacing the chamber seal (Figure 22)

1. Before pulling the chamber seal, note how the bottom left and right edges touch the bottom of the chamber.
2. Pull the seal out from the seal recess.

To replace:

1. Place the bottom left and right ends of the new seal into position, ensuring that the ends touch the chamber bottom.
2. Ensure the lip of seal is directed towards the inside of the chamber when installed.
3. Tuck the corners into the seal recess and push the rest of the seal into place.

Chamber seal – part # 01-113300S

Figure 22

7. Right Side Components

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EXERCISE CAUTION

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PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
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7. Right Side Components

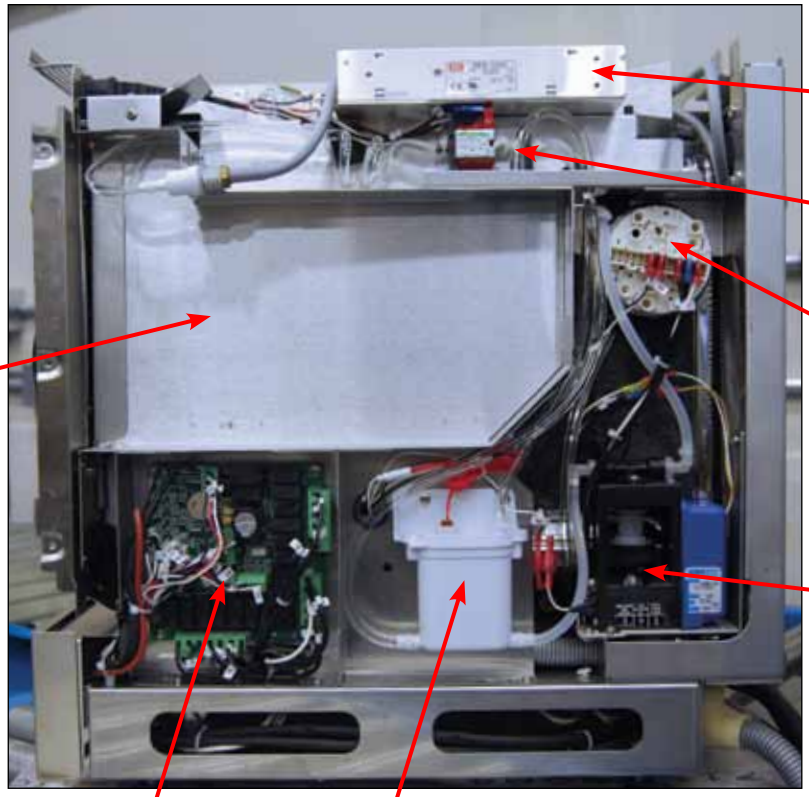

Figure 23

7.1 Removing and reinstalling DC power source

1. Turn off unit and disconnect power cord.
2. Remove 7 wire contacts from the DC power source.
3. Remove 1 screw at the front right of the power supply bracket and loosen 1 screw at the back of the bracket. Slide forward to remove.

To reinstall:

1. Slide the bracket back into position, tighten rear screw and replace screw at front right.
2. Reattach contacts according to Figure 24.

Power supply – part # 01-113266S

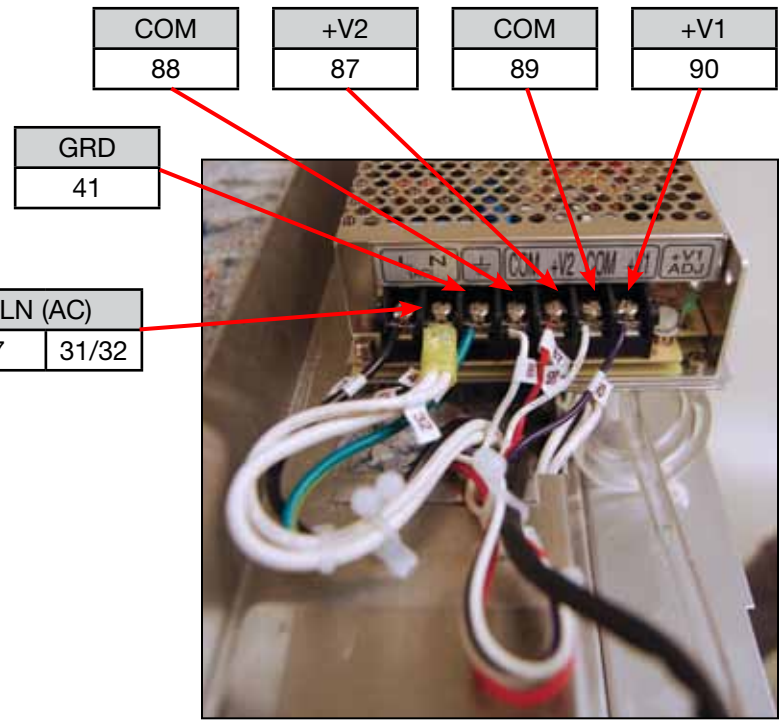

Figure 24

7. Right Side Components

7.2 Removing and reinstalling the reservoir filling pump (Figure 25)

1. Disconnect chemical bag and run shipping cycle to drain dosing system.
2. Turn off unit and disconnect power cord.
3. Remove right panel.
4. Remove 2 wire connections at top of pump.
5. Cut cable ties on input and output tubing.
6. Pull pump out from between rubber mounts.

To reinstall:

1. Put pump into position between rubber mounts and attach tubing to inlet and outlet.
2. Fasten the tubing to the pump with cable ties.
3. Reattach 2 wire connections.
4. Run device test on service menu before replacing panel.
5. Reinstall right panel.

Chemical pump – part # 01-113307S

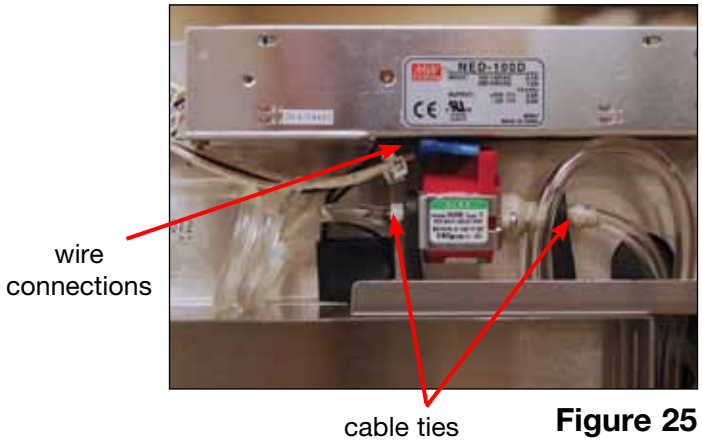

Figure 25

7.3 Removing and reinstalling the dosing/bellows pump (Figure 26a, 26b)

1. Disconnect chemical bag, run shipping cycle to drain system, power off unit, and disconnect power cord.
2. Remove right panel.
3. Cut the cable ties on the inlet and outlet tubes.
4. Disconnect wires 53 and 54 from microswitch.
5. Disconnect yellow wire from 22 and white wire from 33/34.
6. Remove 2 screws to detach bracket from chassis.
7. Pull tubing from inlet and outlet connections.
8. Lift the dosing/bellows pump out and remove 2 screws to detach dosing/bellows pump from bracket.

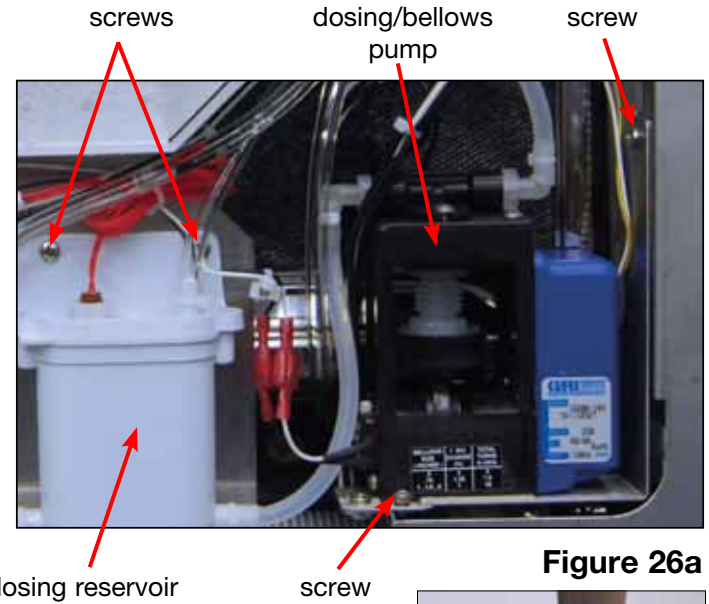

Figure 26a

To reinstall:

1. Reattach dosing/bellows pump to bracket using two screws.
2. Fasten bracket to chassis using 2 screws.
3. Connect wires 53/54 to microswitch, yellow wire to 22 and white to 33/34.
4. Reattach tubing with cable ties.
5. Reinstall right panel.

Dosing/bellows pump – part # 01-113306S

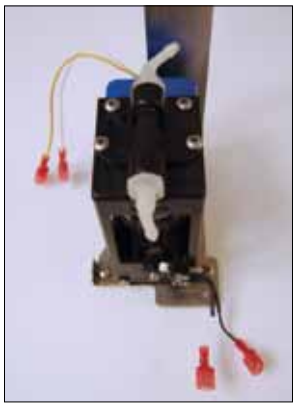

Figure 26b

7. Right Side Components

7.4 Removing and reinstalling the dosing reservoir (See Figure 26a)

1. Disconnect chemical bag, run shipping cycle to drain system, power off unit, and disconnect power cord.
2. Remove right panel.
3. Cut cable ties and disconnect inlet and outlet tubing from reservoir bottom.
4. Disconnect snap connector on red wire 55/56 to the float switch.
5. Cut cable tie on overflow outlet tubing and detach.
6. Remove 2 screws to remove dosing reservoir from chemical bracket.

To reinstall:

1. Attach overflow outlet tubing using cable tie.
2. Attach inlet and outlet tubing using cable ties.
3. Put dosing reservoir into position and replace 2 screws to attach to chemical bracket.
4. Reconnect snap connector on red wire 55/56 to float switch.
5. Reinstall right panel.

Reservoir assembly – part # 01-113323S

7.5 Removing and reinstalling the I/O board (Figure 27a, 27b)

1. Turn off unit and disconnect from power source.
2. Remove right panel.
3. Disconnect all connectors on I/O board.
4. Remove 5 screws fastening I/O board.

Figure 27a

Figure 27b

To reinstall:

1. Ensure unit is disconnected from power source.
2. With IO board in place replace 5 screws.
3. Reconnect all connectors. **NOTE:** all connectors have unique ports. See Figures 27a, 27b, and the schematic in Appendix A for reference.

I/O PCB – part # 01-113310S

7. Right Side Components

7.6 Removing and reinstalling the chemical bracket

1. Remove unit top panel.
2. Remove unit right panel.
3. Remove the chemical detergent drawer and bag.
4. Remove 1 screw at the back of the reservoir filling pump bracket.
5. Remove 6 screws on the chamber fascia.
6. Loosen the 3 screws at the base of the chemical bracket
7. Slide it towards the back to release it from the screws at the base and pull it up and out from the unit.

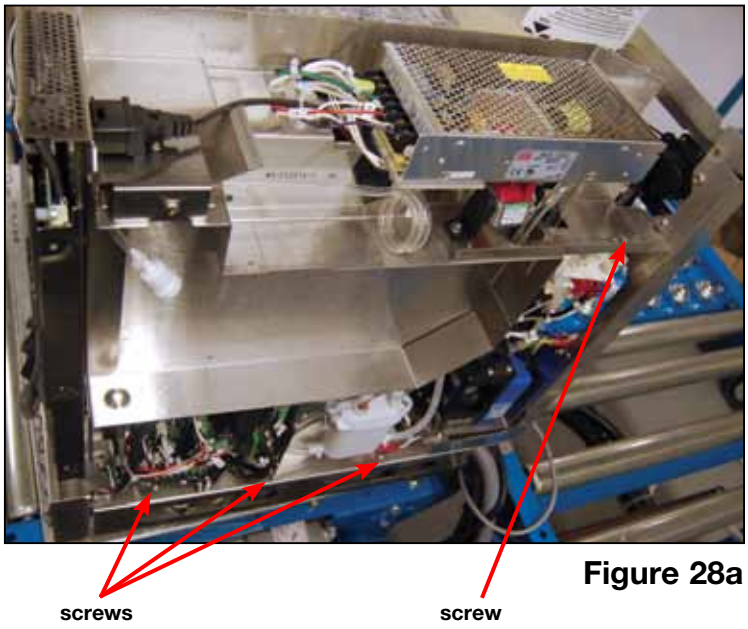

Figure 28a

To reinstall:

1. Slide the bracket back into position, engaging the 3 screws at the base.
2. Fasten the 6 screws on the chamber fascia.
3. Fasten the 1 screw at the back of the reservoir filling pump bracket.
4. Reinstall the chemical detergent drawer and bag, the right panel and the top panel.

Figure 28b

7. Right Side Components

7.7 Removing and reinstalling the pressure switch

1. Remove top cover, right panel and back panel.
2. Remove power supply fan.
3. Remove wiring from pressure switch.
4. Remove 2 screws connecting the rear upper cross-member of the chassis and the left upright to access the snap mount that fastens the pressure switch to the pressure switch bracket.
5. Remove the screw connecting the chemical bracket and the power source bracket.
6. Using needlenose pliers, squeeze the snap mount to release the pressure switch.
7. Unclip the locking clip on the tubing and pull the pressure switch free of the tubing.

Figure 29a

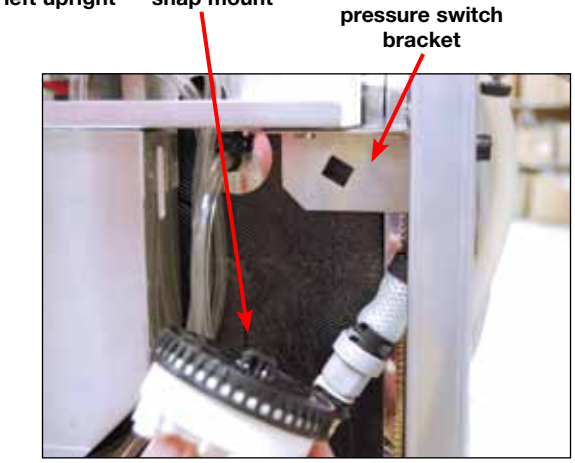

Figure 29b

To reinstall:

1. Before reattaching the pressure switch male end to the tubing, use a syringe to pump a small amount of air into the tube. This will purge any fluid from the pressure tube.
2. Slide the locking clip over the tubing and insert the pressure switch outlet into the tubing and lock the clamp or cable tie.
3. Reconnect the rear upper cross-member and left upright.
4. Reconnect the chemical bracket and power source bracket.
5. Reinstall the power source fan.
6. Reconnect the wiring according to Figure 29c.

Two-level pressure switch – part # 01-113265S

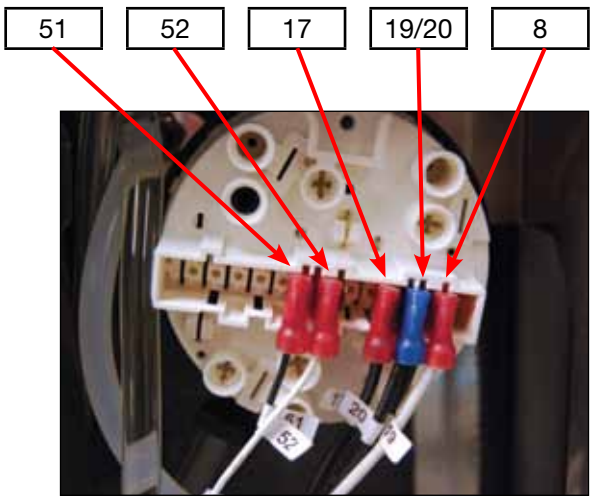

Figure 29c

8. Left Side Components

WARNINGS AND PRECAUTIONS

If you have questions about the unit you are repairing, please do not hesitate to contact your local SciCan representative for information. Also, the HYDR*IM* is heavy. Exercise caution and seek assistance when lifting or carrying units.

EXERCISE CAUTION

- Hazardous voltages are accessible when the cover is removed.
- Disconnect the power cord before servicing the power mains portion of the controller board and associated devices.
- Removing the panels will expose some sharp metal edges. Be careful and wear long sleeves and gloves.

PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
- A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.
- A protective bonding impedance test (ground continuity) must be performed on the unit if components of the protective earthing system are changed or if connections are broken and remade.

PROTECT THE UNIT

- The HYDR*IM* contains electronic circuitry that is static sensitive. Always wear a static strap when working with or near printed wiring boards. In addition, use static footstraps, grounding mats and grounded work surfaces when servicing microprocessor devices. Transport boards and devices in static protected bags.
- In order to ensure adherence to the applicable safety agency approvals, state, provincial, regional and national laws, replace components with SciCan approved parts only.

8. Left Side Components

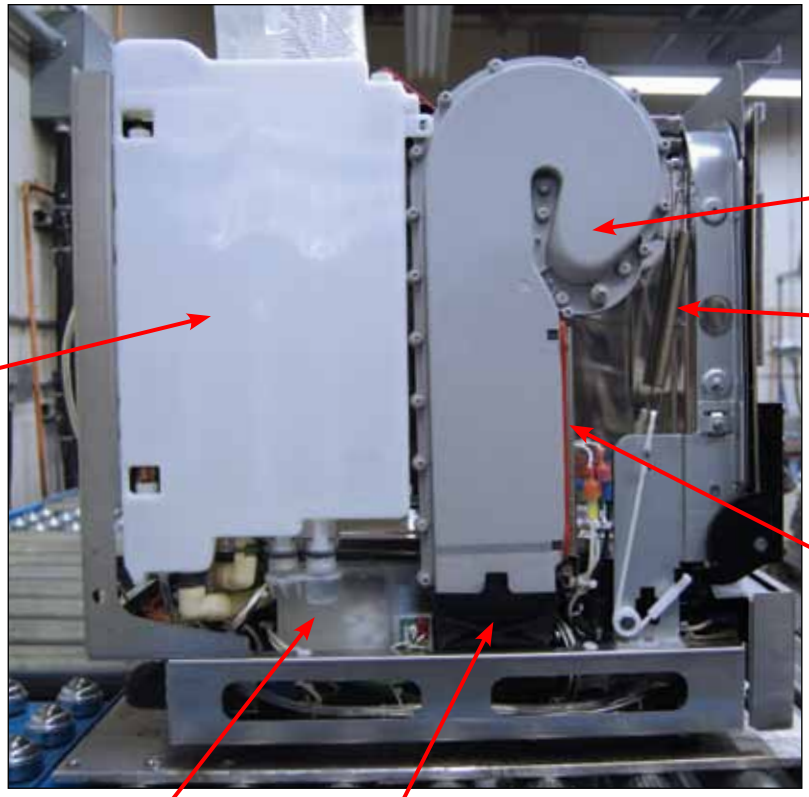

Figure 30

8.1 Removing and reinstalling the air gap

1. Run a shipping cycle to drain.
2. Remove the top panel, left panel and back panel. (See Section 4. Removing and Replacing Panels.)
3. From the top, follow the wire harness from the air gap to disconnect the Empty: 79/80; Full: 75/76 and Overflow: 78/77 wires (should be attached with color-coded cable ties – identify the wires if they are not)
4. Once labeled, disconnect the wires.
5. Disconnect the inlet and outlet hoses.
6. Remove the 2 screws on the left of the air gap. Access these from the back of the unit through the two holes in the rear chassis upright. (Figure 31a)
7. Remove the 1 screw connecting the air gap and the dryer assembly. (Figure 31a)
8. Remove the drainage tube.

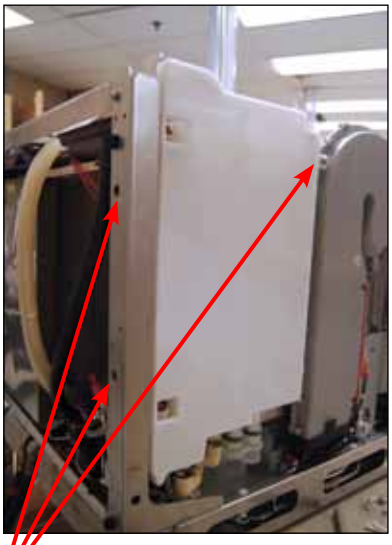

Figure 31a

8. Left Side Components

9. Disconnect the pump breather tube at air gap. (Figure 31b)
10. Disconnect the 2 hose clamps using pliers to slide them down and out of the way. (Figure 31c)
11. To remove the air gap, pull it up to clear the water softener connections.

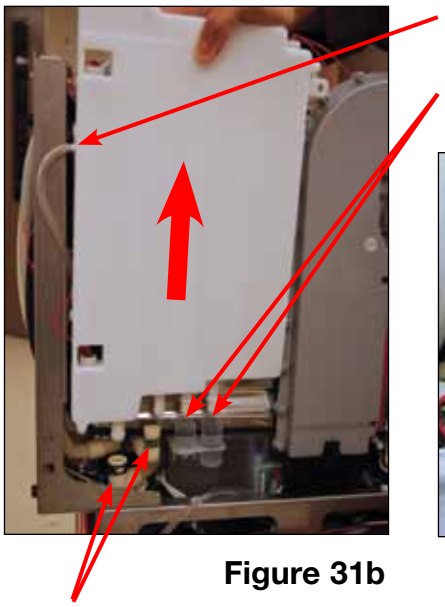

Figure 31b

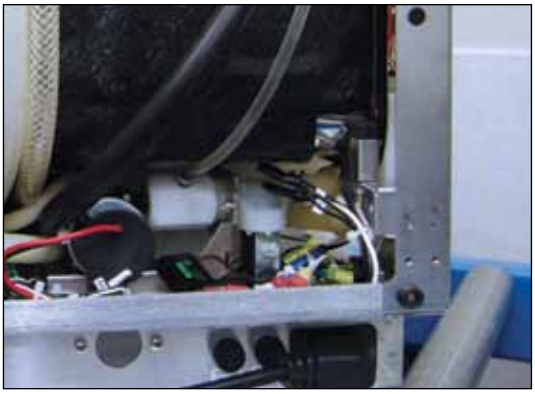

Figure 31c

To reinstall:

1. Reconnect the pump breather tube to air gap and fasten with a cable tie.
2. Apply soap (or silicone lubricant, if available) to the water softener connections and push the air gap down into position. Ensure the overflow outlet at the top of the air gap is properly aligned with the tray.
3. Fasten the 2 screws at the left side of the air gap.
4. Reconnect tubing and tighten hose clamps.
5. Reconnect the wire connections according to the color-coded cable ties or your own markings.
6. Reinstall panels.

Backflow preventer – part # 01-113318S

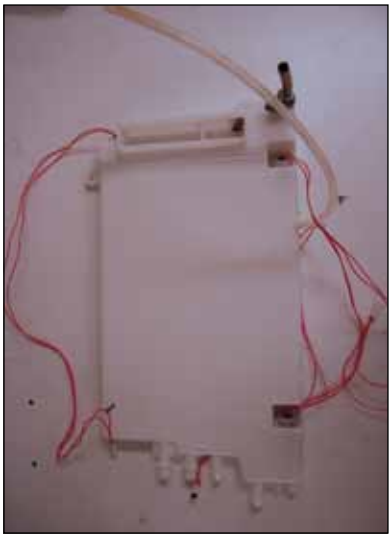

Figure 31d

8. Left Side Components

8.2 Removing and reinstalling the dryer heater

1. Remove the left panel and cover. (See Section 4. Removing and Replacing Panels.)
2. Disconnect the heater wiring.
3. Unscrew the 2 screws.
4. Cut the wiring cable tie.
5. Remove the door spring and tuck the wiring harness out of the way under the chamber to improve access.
6. Slide the heater out of the dryer duct housing.

To reinstall:

1. Put the heater back in the dryer assembly
2. Insert the screws and do not overtighten.
3. Reconnect the wiring.
4. Reinstall panels.

Heater-air – part # 01-113273S

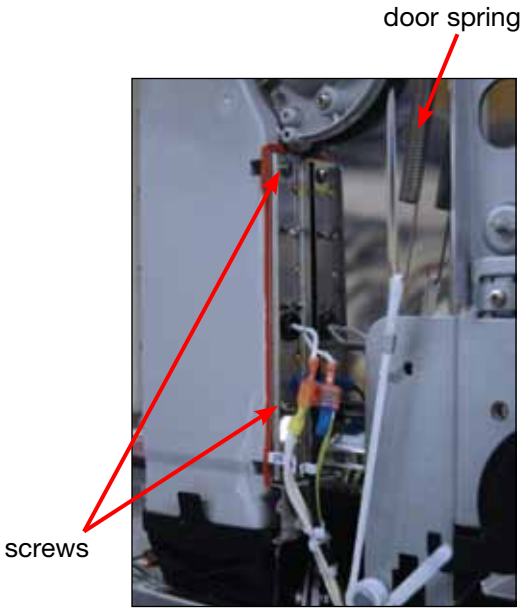

Figure 32

8.3 Removing and reinstalling the dryer assembly

1. Remove the left panel and cover. (See Section 4. Removing and Replacing Panels.)
2. From inside the chamber, remove the 4 screws holding the dryer outlet cover.
3. Remove the screw connecting the dryer assembly to the air gap.
4. Disconnect the dryer heater wiring.
5. Pull the dryer free from the rubber air intake boot.

Figure 33a

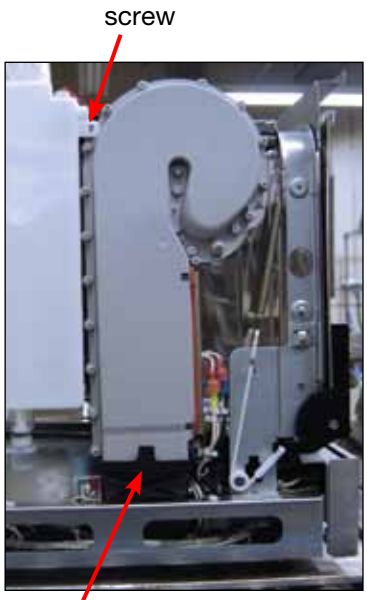

Figure 33b

To reinstall:

1. Put the dryer assembly in place.
2. Reattach the rubber air intake boot.
3. Attach the dryer outlet cover on the chamber side and fasten with 4 screws.
4. Reattach the screw connecting the dryer assembly to the air gap.
5. Reattach the dryer heater wiring.
6. Reinstall panels.

Duct, vertical – part # 01-113324S

9. Rear Components

WARNINGS AND PRECAUTIONS

If you have questions about the unit you are repairing, please do not hesitate to contact your local SciCan representative for information. Also, the HYDR*IM* is heavy. Exercise caution and seek assistance when lifting or carrying units.

EXERCISE CAUTION

- Hazardous voltages are accessible when the cover is removed.
- Disconnect the power cord before servicing the power mains portion of the controller board and associated devices.
- Removing the panels will expose some sharp metal edges. Be careful and wear long sleeves and gloves.

PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
- A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.
- A protective bonding impedance test (ground continuity) must be performed on the unit if components of the protective earthing system are changed or if connections are broken and remade.

PROTECT THE UNIT

- The HYDR*IM* contains electronic circuitry that is static sensitive. Always wear a static strap when working with or near printed wiring boards. In addition, use static footstraps, grounding mats and grounded work surfaces when servicing microprocessor devices. Transport boards and devices in static protected bags.
- In order to ensure adherence to the applicable safety agency approvals, state, provincial, regional and national laws, replace components with SciCan approved parts only.

9. Rear Components

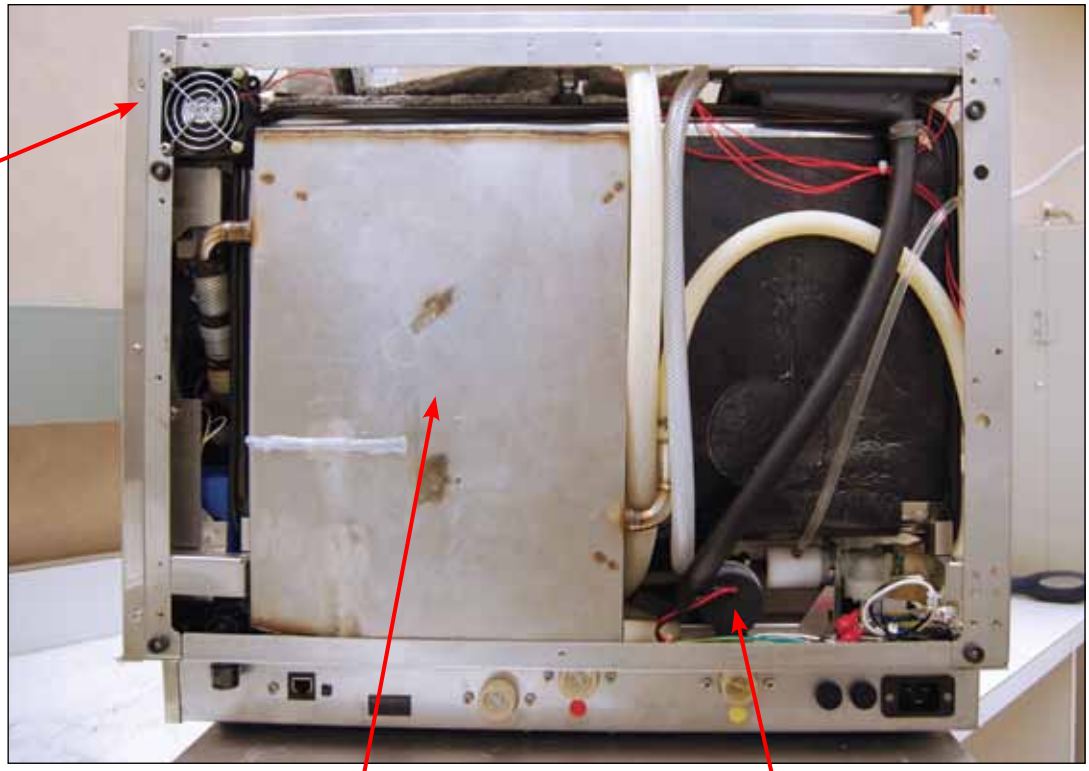

Figure 34

9.1 Removing and reinstalling the cooling fan (Figure 35)

1. Remove top cover and back cover. (See Section 4. Removing and Replacing Panels.)
2. Disconnect wires 91 and 92 from the snap connection on the top wiring harness.
3. Remove 2 screws holding fan to top left upright at the back of the unit and remove fan.

To reinstall:

1. Put fan into position and replace 2 screws.
2. Reconnect wires to wiring harness.
3. Reinstall panels.

Fan, 24V – part # 01-113329S

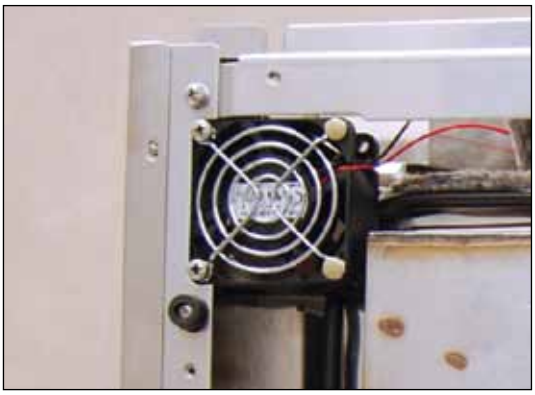

Figure 35

9. Rear Components

9.2 Removing and reinstalling the air gap pump

1. Run a shipping cycle to drain the unit.
2. Remove the top cover, left panel and back cover. (See Section 4. Removing and Replacing Panels.)
3. Remove the spring clips on hoses at the bottom of the air gap. One outlet to the pump and the other inlet from the valve.
4. Disconnect wiring from solenoids.
5. Cut the cable tie and disconnect the wires.
6. Remove the two screws holding the bracket to the chassis.
7. Take the pump assembly out and pull the pump breather tube from the pump **CAUTION:** fitting is delicate; be careful while pulling the tube – it might damage the fitting threads.
8. Cut the cable tie to separate the pump motor from the bracket and pull the motor from the coupling.

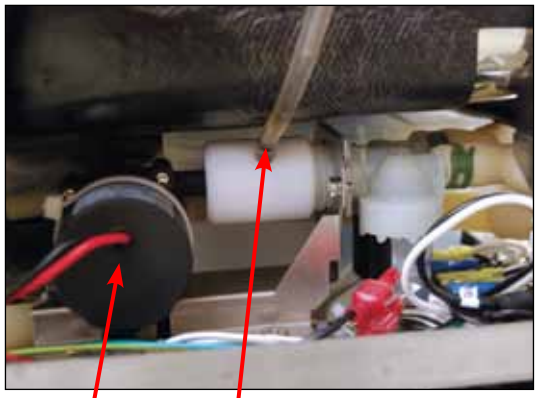

Figure 36a

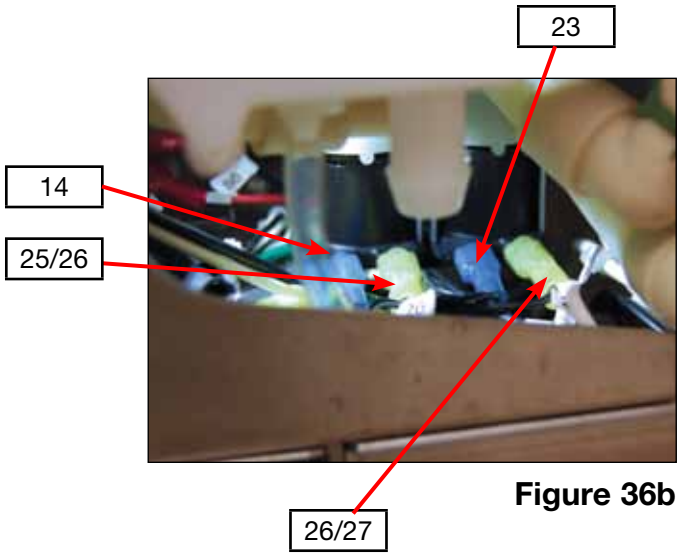

Figure 36b

To reinstall:

1. Use a cable tie to fasten the pump motor to the bracket.
2. Connect the pump breather tube to the pump and bring the pump assembly into position.
3. Fasten the pump bracket to the chassis using two screws.
4. Re-connect the wires to the pump: red 85 to red and black 86 to black.
5. Reconnect solenoid wires. (See Figure 36b)
6. Replace the hoses on the air gap - one outlet to the pump and the other inlet from the valve. Slide spring clips into place to fasten hoses.
7. Reinstall panels.

Pump, 24V – part # 01-113283S

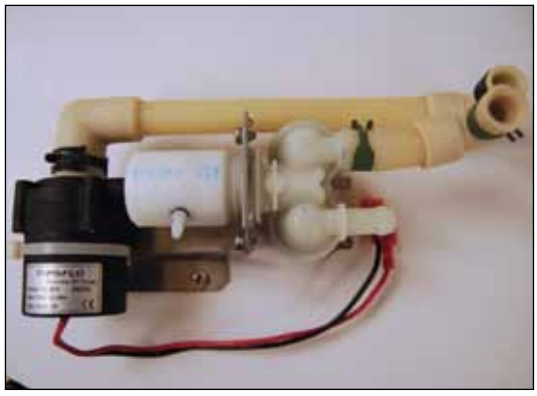

Figure 36c

9. Rear Components

9.3 Removing and reinstalling the condenser

1. Run shipping cycle to drain system, power off unit and disconnect power cord.
2. Remove top cover and back panel.
3. From inside the chamber, remove the 2 screws to release the splash shield. (Figure 37a)
4. Using a 7 mm nut driver, remove the condenser mounting ring. (Figure 37b)
5. From the back of the unit, remove the clamp on the condenser inlet hose.
6. Remove the lower hose clamp on the condenser outlet.
7. Push down gently on the condenser and tip it back to access the hose clamp on the condenser air exhaust. (Figure 37c)
8. Loosen and slide the hose clamp over the hose to free the condenser air exhaust.
9. Release the clamp on the condenser drain and remove the condenser.

Figure 37a

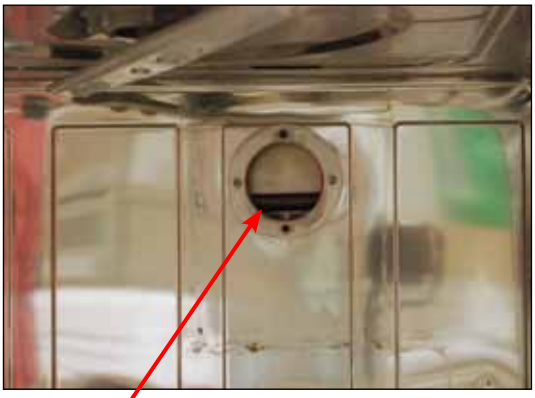

Figure 37b

To reinstall:

1. Attach the air exhaust and drain tube hose clamps.
2. Put the condenser back into place, aligning the screw posts to fit the holes in the chamber.
3. From inside the chamber, replace the mounting ring and fasten the 2 retaining nuts.
4. Replace the splash shield.
5. Reattach the inlet and outlet hoses.

Condenser assembly – part # 01-113334S

Push condenser in direction of thick arrows

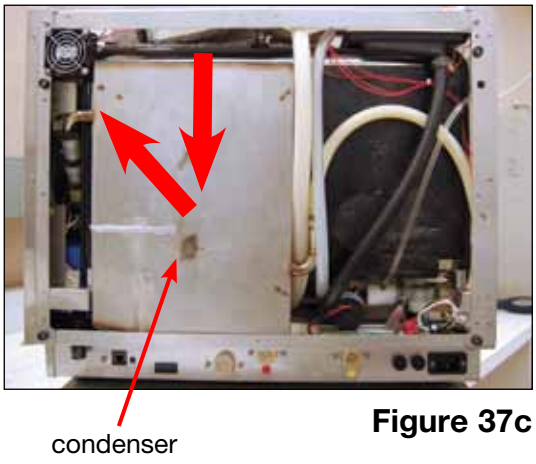

Figure 37c

Figure 37d

10. Top Components

WARNINGS AND PRECAUTIONS

If you have questions about the unit you are repairing, please do not hesitate to contact your local SciCan representative for information. Also, the HYDR*IM* is heavy. Exercise caution and seek assistance when lifting or carrying units.

EXERCISE CAUTION

- Hazardous voltages are accessible when the cover is removed.
- Disconnect the power cord before servicing the power mains portion of the controller board and associated devices.
- Removing the panels will expose some sharp metal edges. Be careful and wear long sleeves and gloves.

PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
- A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.
- A protective bonding impedance test (ground continuity) must be performed on the unit if components of the protective earthing system are changed or if connections are broken and remade.

PROTECT THE UNIT

- The HYDR*IM* contains electronic circuitry that is static sensitive. Always wear a static strap when working with or near printed wiring boards. In addition, use static footstraps, grounding mats and grounded work surfaces when servicing microprocessor devices. Transport boards and devices in static protected bags.
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10. Top Components

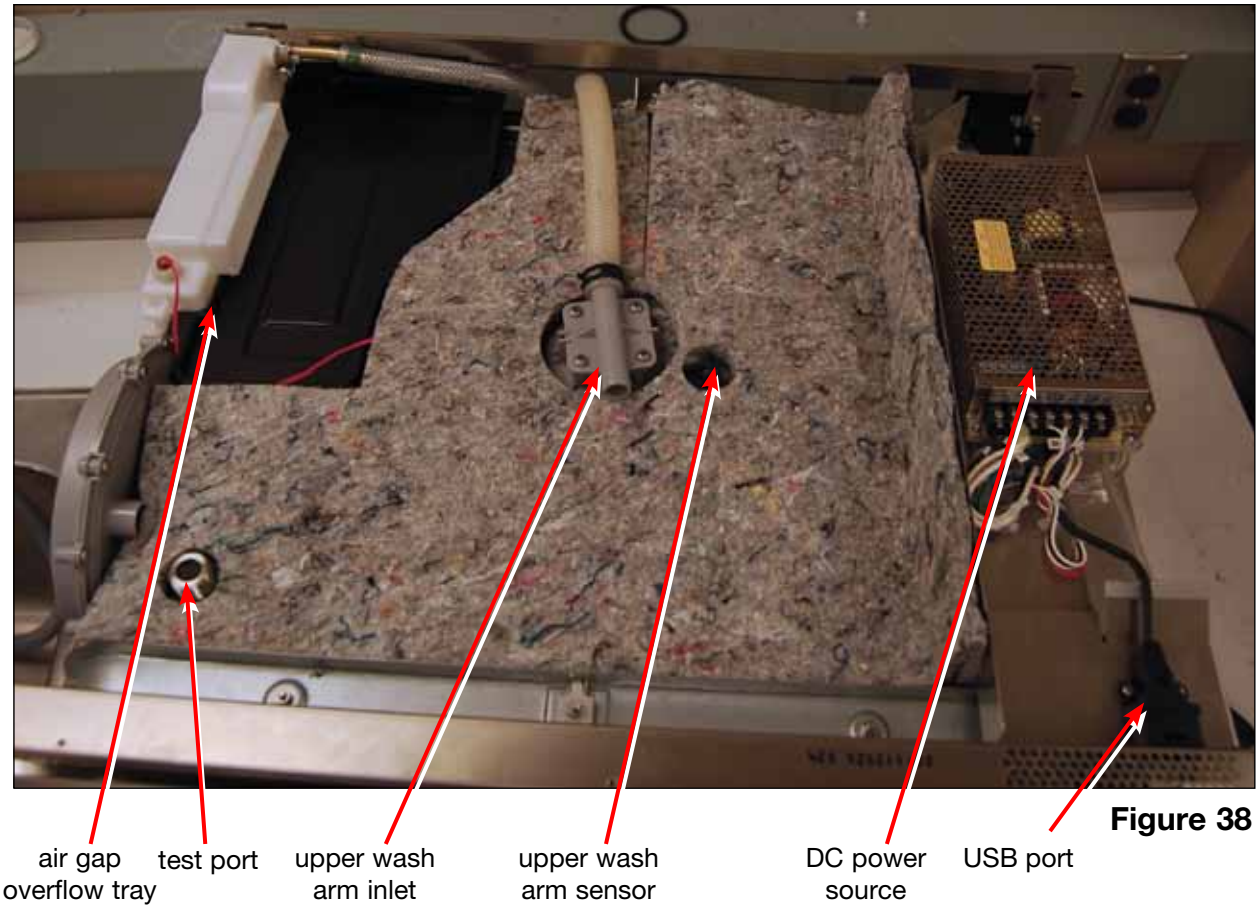


Figure 38

10.1 Removing and reinstalling the USB port (Figure 38)

1. Remove top cover, left and right panels. (See Section 4. Removing and Replacing Panels.)
2. Remove chemical bracket. (See Section 7.6 Removing and replacing the chemical bracket.)
3. Remove 2 screws holding USB port to chassis.
4. Remove door fascia. (See Section 6.1 Removing and replacing the door fascia.)
5. Remove kickplate. (See Section 5.1 Removing and replacing the kickplate.)
6. Disconnect USB from the LCD controller board.
7. Cut cable ties on wiring harness and pull cable through to remove.

To reinstall:

1. Thread USB cable to LCD controller board and connect.
2. Fasten USB port to chassis.
3. Reinstall kickplate, door fascia, chemical bracket and panels.

Cable, USB – part # 01-113261S

10. Top Components

10.2 Disconnecting and reinstalling the upper wash arm inlet (Figure 38)

1. Remove the top cover. (See Section 4.1 Removing and reinstalling the top cover.)
2. Pull down on the upper wash arm inside the chamber to remove it.
3. Unscrew the mounting nut to release the upper wash arm input.

To reconnect the upper wash arm input:

1. Put the upper wash arm input into position.
2. Fasten the mounting nut on the inside.
3. Reinstall the upper wash arm by pushing it into position.
4. Reinstall top cover.

Top arm fitting – part # 01-113600S

10.3 Removing and reinstalling the upper wash arm sensor (Figure 38)

1. Remove the cover. (See Section 4.1 Removing and reinstalling the top cover.)
2. Disconnect black wires 73 and 74.
3. Unscrew the mounting nut to release the sensor.

To reinstall:

4. Place the sensor into position and hand-tighten the mounting nut.
5. Reconnect the black wires 73 and 74 to the wiring harness.
6. Reinstall top cover.

Proximity sensor – part # 01-113681S

11. Bottom Components

WARNINGS AND PRECAUTIONS

If you have questions about the unit you are repairing, please do not hesitate to contact your local SciCan representative for information. Also, the HYDR*IM* is heavy. Exercise caution and seek assistance when lifting or carrying units.

EXERCISE CAUTION

- Hazardous voltages are accessible when the cover is removed.
- Disconnect the power cord before servicing the power mains portion of the controller board and associated devices.
- Removing the panels will expose some sharp metal edges. Be careful and wear long sleeves and gloves.

PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
- A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.
- A protective bonding impedance test (ground continuity) must be performed on the unit if components of the protective earthing system are changed or if connections are broken and remade.

PROTECT THE UNIT

- The HYDR*IM* contains electronic circuitry that is static sensitive. Always wear a static strap when working with or near printed wiring boards. In addition, use static footstraps, grounding mats and grounded work surfaces when servicing microprocessor devices. Transport boards and devices in static protected bags.
- In order to ensure adherence to the applicable safety agency approvals, state, provincial, regional and national laws, replace components with SciCan approved parts only.

11. Bottom Components

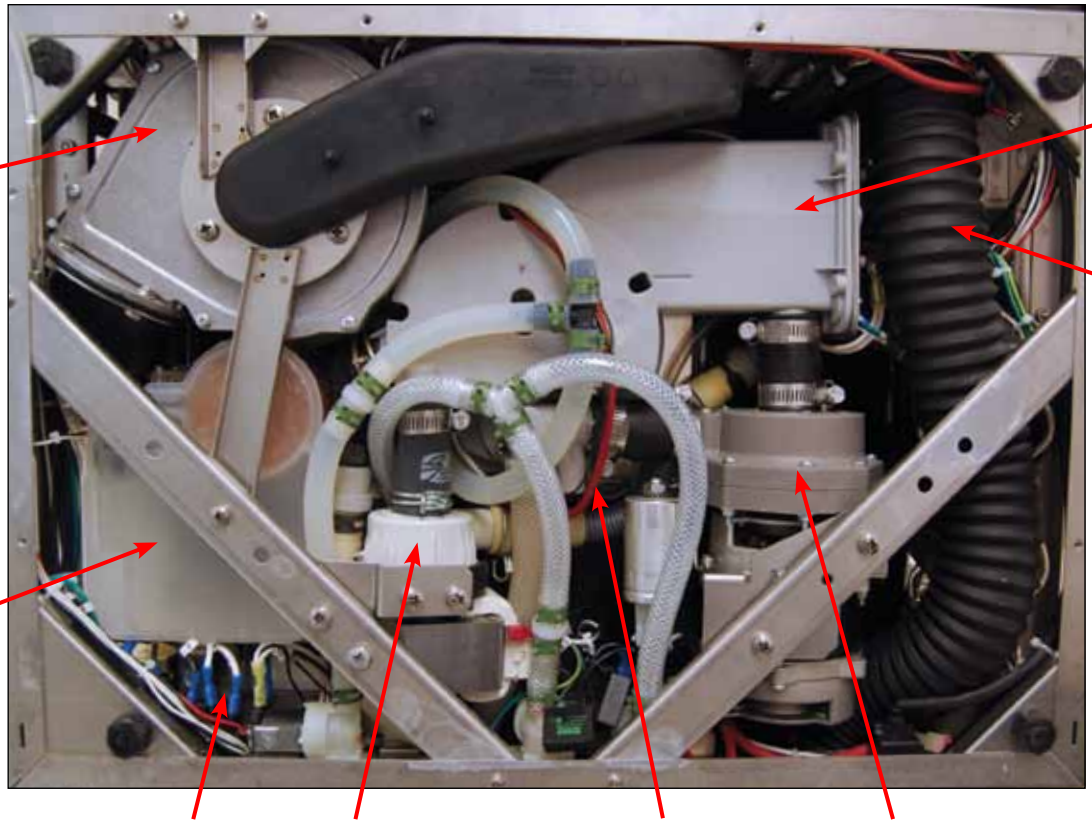


Figure 39

11.1 Removing and reinstalling the recirculation pump

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit, disconnect power and flip unit onto its back. (For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Loosen and remove the hose clamps on both the inlet and outlet hoses of the recirculation pump.
5. Remove the diagonal brace (4 screws). (Figure 40a)
6. Disconnect wires.
7. Pull down on the recirculation pump to disconnect it and pull it out.

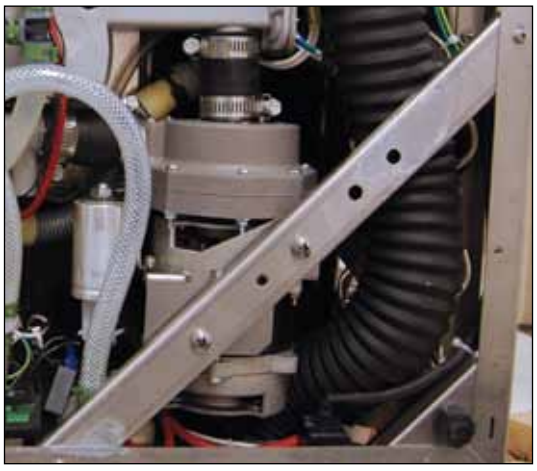


Figure 40a

11. Bottom Components

To reinstall the recirculation pump:

1. Place pump into position.
2. Reattach wires in the following sequence.
   - red – 34/35
   - Yellow/green – 43
   - Brown – 18
3. Attach hoses and tighten hose clamps.
4. Reattach diagonal brace.
5. Reinstall bottom panel. To reinstall, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

Figure 40b

Pump, circulation 50Hz – part # 01-113305S

Pump, circulation 60Hz – part # 01-113304S

11.2 Removing and reinstalling the water heater

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit, disconnect power and flip unit onto its back. (For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Disconnect the dryer exhaust tubing from the dryer outlet on the kickplate and pull it out of the way to access the heater.
5. Remove water heater wires.
6. Remove grounding wire nut
7. Remove 6 screws fixing heater to sump.
8. Pull the heater out gently.

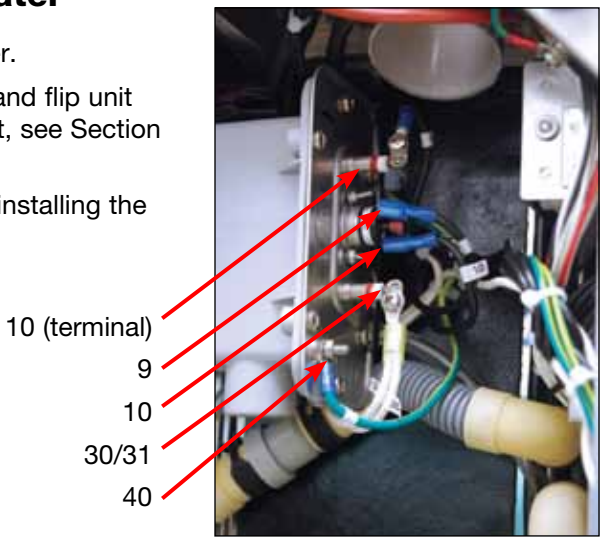


Figure 41a

To reinstall:

1. Insert gasket into gasket recess first, then insert heater and replace screws.
2. Connect wires. (Figure 41a)
3. Reattach dryer exhaust tubing to the outlet in kickplate.
4. Reinstall bottom panel. To reinstall, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

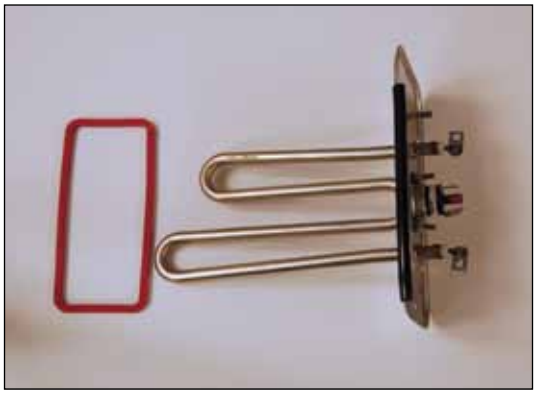


Figure 41b

Heater-sump kit – part # 01-113272S

11. Bottom Components

11.3 Removing and reinstalling the drain pump

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit, disconnect power and flip unit onto its back. (For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Remove the screws from the bracket to detach the pump from the diagonal brace. (Figure 42a)
5. Remove diagonal brace.
6. Loosen the hose clamp to the sump.
7. Pull down on the drain pump (**CAUTION:** pump will still have residual water)
8. Pull drain pump out a bit to access the clamp on the outlet hose to the drain and remove this clamp.
9. Disconnect wiring.

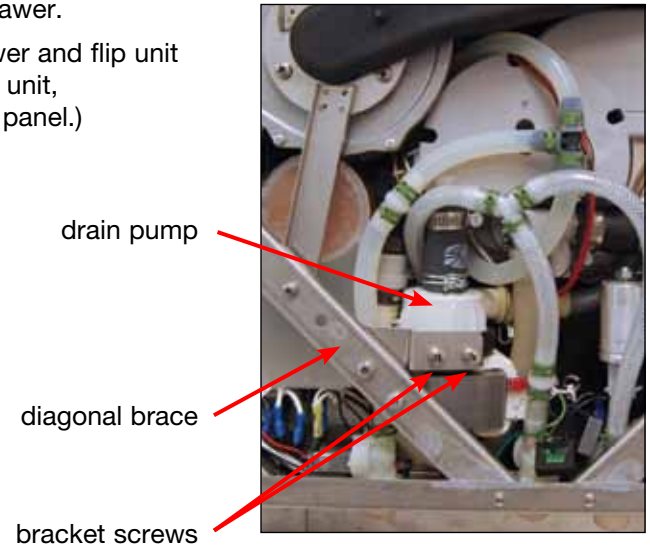


Figure 42a

To reinstall the drain pump:

1. Reconnect the wires.
2. Connect the outlet hose first and then the inlet hose, tightening clamp connections.
3. Reinstall bracket
4. Reinstall diagonal brace.
5. Reinstall bottom panel. To reinstall, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

Drain pump – part # 01-113303S

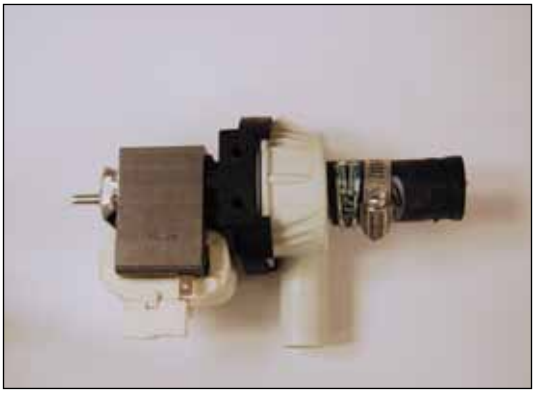


Figure 42b

11. Bottom Components

11.4 Removing and reinstalling the sump temperature sensor

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit, disconnect power and flip unit onto its back. (For detailed instructions on flipping the unit see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Remove the drain pump. (See Section 11.3 Removing and reinstalling the drain pump)
5. Inside chamber, remove coarse filter and fine filter to access sump.
6. Unscrew the nut on the inside by hand and pull it out from the unit bottom.
7. Disconnect wires 71 and 72 from the wiring harness

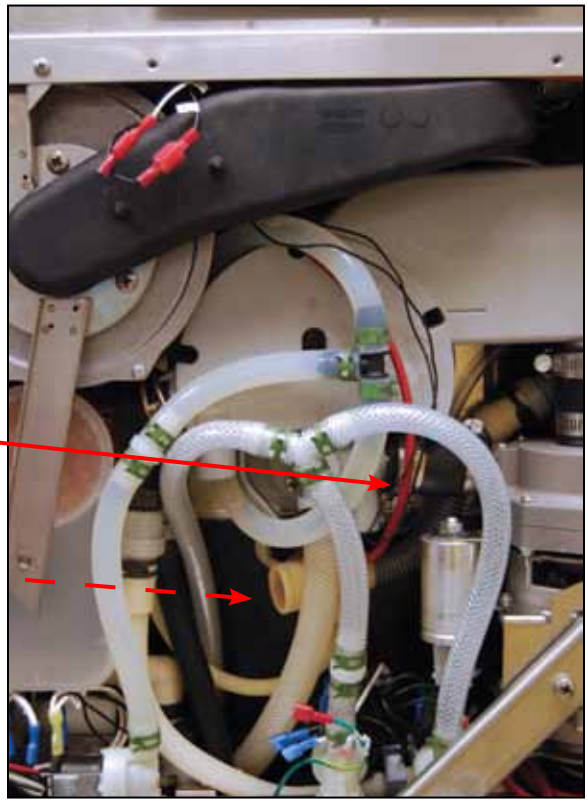


Figure 43a

NOTE: Resistance Value of the temperature sensor is 100 Ω @ 0°C

Figure 43b

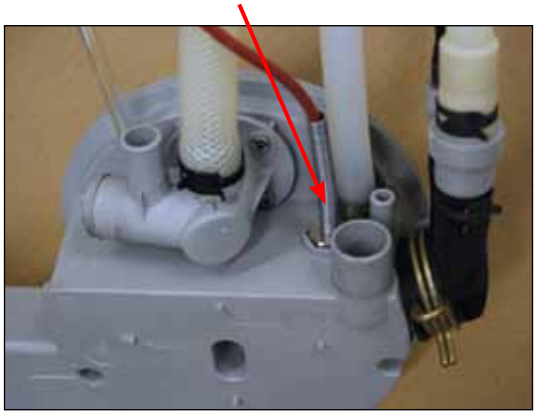


Figure 43c

To replace:

1. Reconnect the wires.
2. Hand-tighten the sensor into position.
3. Reinstall the drain pump.
4. Reinstall bottom panel. To reinstall, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

Temperature sensor – part # 01-113271S

11. Bottom Components

11.5 Removing and reinstalling the bottom RPM sensor

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit, disconnect power and flip unit onto its back. (For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Remove the drain pump. (See Section 11.3 Removing and reinstalling the drain pump)
5. Disconnect wires 71 and 72 and pull from underneath the air intake manifold.
6. With the drain pump out, unscrew by hand the black mounting nut on the lower RPM sensor.
7. Unscrew sensor from the sensor housing.

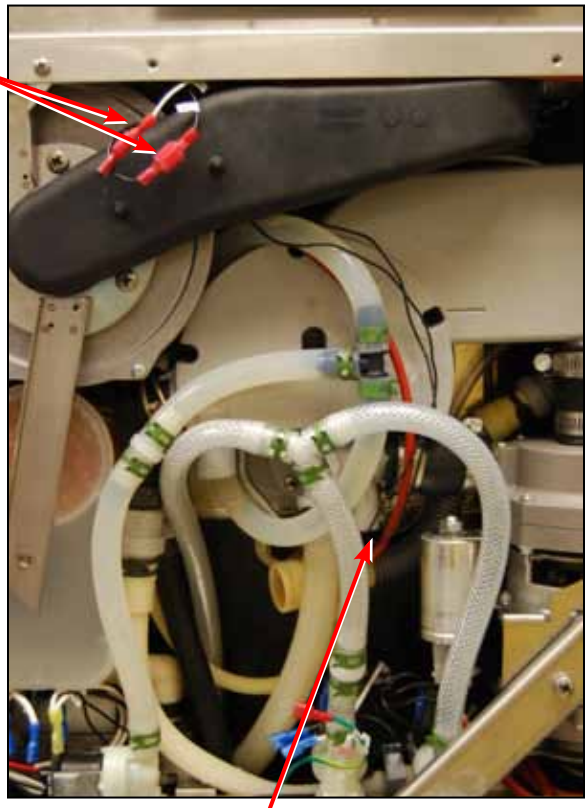


Figure 44

To replace:

1. Hand-tighten the black nut on the sensor (Do not over tighten).
2. Fish wires underneath the air intake manifold and reconnect terminals.
3. Reinstall the drain pump.
4. Reinstall bottom panel. To reinstall, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

!

11. Bottom Components

11.6 Removing and reinstalling the dryer motor (blower)

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit, disconnect power and flip unit onto its back. (For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Remove diagonal brace.
5. Remove 2 screws at the chassis and 3 screws on dryer motor bracket. (Figure 45a)
6. Disconnect dryer exhaust from exhaust outlet.
7. Pull dryer motor out (blower) with dryer boot attached. (Figure 45b)
8. Disconnect wiring.
9. Detach dryer boot from dryer motor (blower).

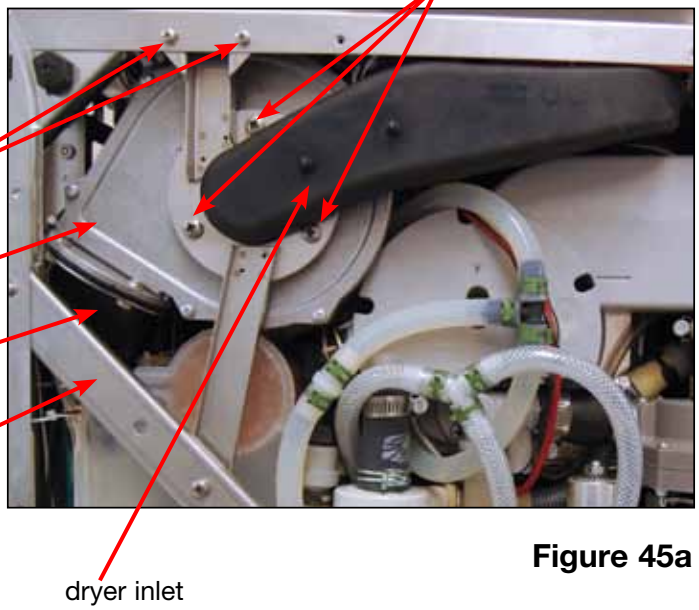


Figure 45a

Figure 45b

To reinstall:

1. Connect wires.
2. Put dryer motor (blower) into place.
3. Thread dryer exhaust back into position.
4. Fasten top of bracket to chassis with 3 screws.
5. Fasten dryer motor (blower) to dryer motor bracket with 3 screws.
6. Reattach the dryer motor (blower) exhaust boot to dryer duct. Make sure exhaust boot is properly attached to dryer duct, otherwise air/water will leak.
7. Reinstall bottom panel. To reinstall, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

!

Blower, 24V – part # 01-113285S

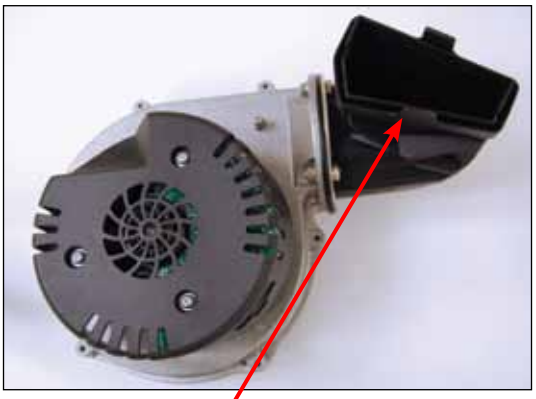


Figure 45c

11. Bottom Components

11.7 Removing and reinstalling the water softener system

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit and disconnect power.
3. Remove the softener cap and soak/vacuum all the water inside the water softener.
4. Remove the top and left panels.
5. From inside the chamber, remove the water softener system ring nut. (Figure 46a)
6. Flip unit onto its back. (For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
7. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
8. Remove the diagonal brace.
9. Remove the 4 screws on the dryer bracket and the 2 screws connecting the bracket to the chassis. (Figure 46b)
10. Disconnect wires to the solenoid and wires for the salt level sensor.
11. Pull water softener outwards (**CAUTION:** will contain residual water) to access and disconnect the outlet hose and remove water softener.

Figure 46a

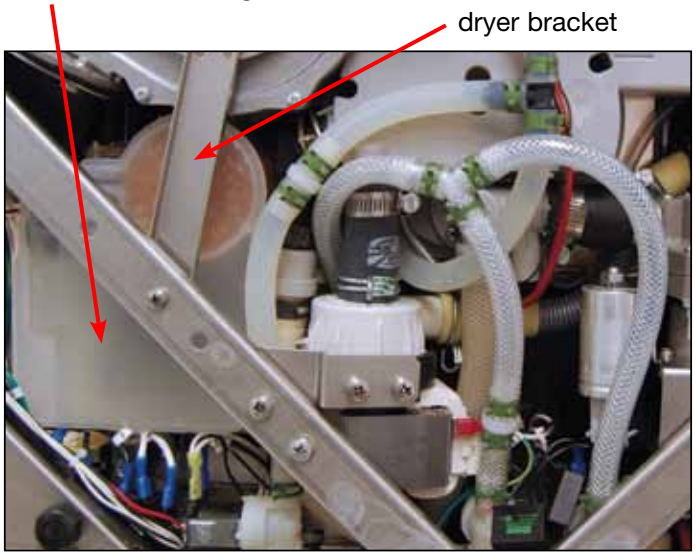


Figure 46b

To reinstall:

1. Reconnect the outlet hose and push the water softener system back into position (lubricate the air gap inlets with silicone if necessary).
2. From inside the chamber, fasten the ring nut tightly (**NOTE: DO NOT** tighten by hand. Fasten this nut properly to avoid leaks).
3. Reconnect tubing.
4. Reconnect wiring.
5. Reinstall bottom panel. To reinstall, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)
6. Reinstall the top and left panels.

Figure 46c

Softener assembly – part # 01-113325S

11. Bottom Components

11.8 Removing and reinstalling the water valves

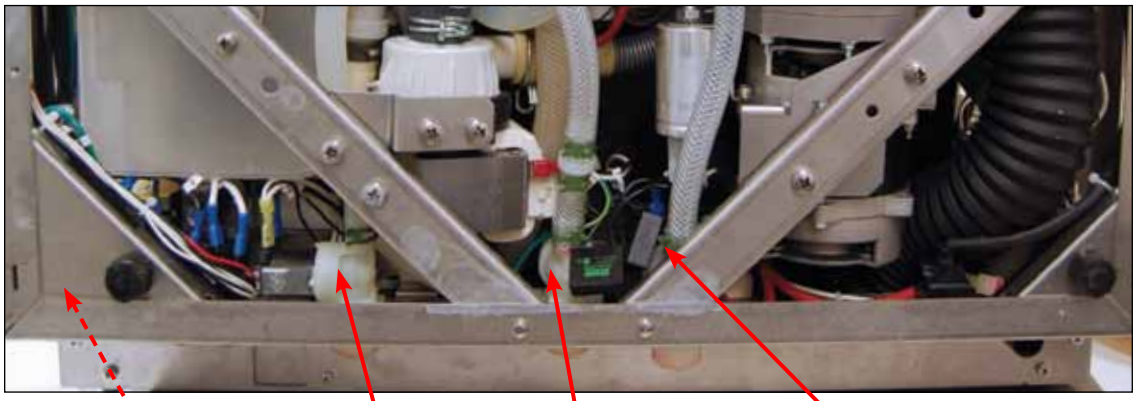


Figure 47

1. Valves for hot water, cold water and R/O water (if fitted) inlets can be accessed from the unit bottom.
2. Run a shipping cycle to drain the unit, disconnect the power, and flip it on its back. For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Valves are accessible from this position. (Figure 47)
5. Unscrew valve from chassis to remove.

Valve	Color Coding
Cold water inlet	Blue
Hot water inlet	Red
R/O water inlet (if fitted)	Yellow

To reinstall, reverse instructions.

! To reinstall the bottom panel, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

Valve, inlet – part # 01-113330S

11.9 Removing and reinstalling the AC power inlet

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit, disconnect power and flip unit onto its back. (For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Remove contacts. (Figure 47)
5. Unscrew mounting screws to remove AC power inlet. (Figure 48)

To reinstall, reverse instructions.

! To reinstall the bottom panel, slide the panel back into position, replace the screws and pull the rubber standoffs back through the panel. (**NOTE:** if the rubber standoffs are not pulled through the panel, the dryer inlet duct will not function correctly.)

Line filter, 20A – part # 01-110505S

Figure 48

12. Lumens Cleaning System (if fitted)

WARNINGS AND PRECAUTIONS

If you have questions about the unit you are repairing, please do not hesitate to contact your local SciCan representative for information. Also, the HYDR*IM* is heavy. Exercise caution and seek assistance when lifting or carrying units.

EXERCISE CAUTION

- Hazardous voltages are accessible when the cover is removed.
- Disconnect the power cord before servicing the power mains portion of the controller board and associated devices.
- Removing the panels will expose some sharp metal edges. Be careful and wear long sleeves and gloves.

PERFORM TESTS

- If panels are removed, a dielectric strength test (Hi-Pot) AND a protective bonding impedance test (ground continuity) must be performed on the HYDR*IM* when the work is completed and after the cover has been returned to the unit.
- A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.
- A protective bonding impedance test (ground continuity) must be performed on the unit if components of the protective earthing system are changed or if connections are broken and remade.

PROTECT THE UNIT

- The HYDR*IM* contains electronic circuitry that is static sensitive. Always wear a static strap when working with or near printed wiring boards. In addition, use static footstraps, grounding mats and grounded work surfaces when servicing microprocessor devices. Transport boards and devices in static protected bags.
- In order to ensure adherence to the applicable safety agency approvals, state, provincial, regional and national laws, replace components with SciCan approved parts only.

12. Lumens Cleaning System (if fitted)

12.1 Removing and reinstalling the Lumens Cleaning System water supply

1. Disconnect the detergent bag and remove bag and drawer.
2. Run a shipping cycle to drain the unit, disconnect power and flip unit onto its back. (For detailed instructions on flipping the unit, see Section 4.5 Removing and reinstalling the bottom panel.)
3. Remove bottom panel. (See Section 4.5 Removing and reinstalling the bottom panel.)
4. Disconnect the braided silicone tubing of the LCS system from the sump manifold inlet. (Figure 49 a)
5. Return the unit to an upright position and remove the back panel. (See Section 4.4 Removing and reinstalling the back panel.)
6. From inside the chamber, remove the 4 screws on the LCS mounting flange. (Figure 49b)
7. From the back, disconnect the LCS block . interface wires from the wiring harness (2 reed switches and 1 flow switch).
8. Disconnect the air inlet from the LCS block interface. (Figure 49c)
9. With the LCS tubing disconnected from the sump, pull the LCS block interface with the tubing attached, from the unit. **NOTE:** The tubing section contains a flow switch and check valve. (Figure 49d).

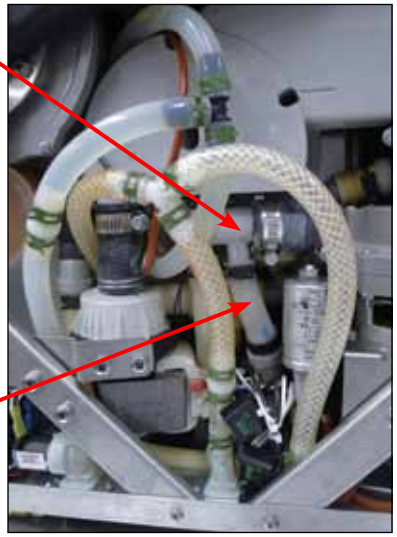


Figure 49a

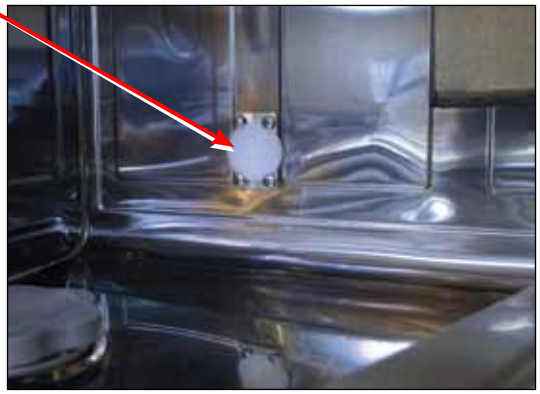


Figure 49b

To reinstall:

1. With the unit in an upright position fish the tubing from the back of the unit towards the sump.
2. Reconnect the air supply to the LCS block interface and wires to wire harness.
3. Reconnect the LCS block interface to the unit by attaching the flange inside the chamber.
4. Flip unit onto its back and attach tubing to sump manifold inlet.

Figure 49c

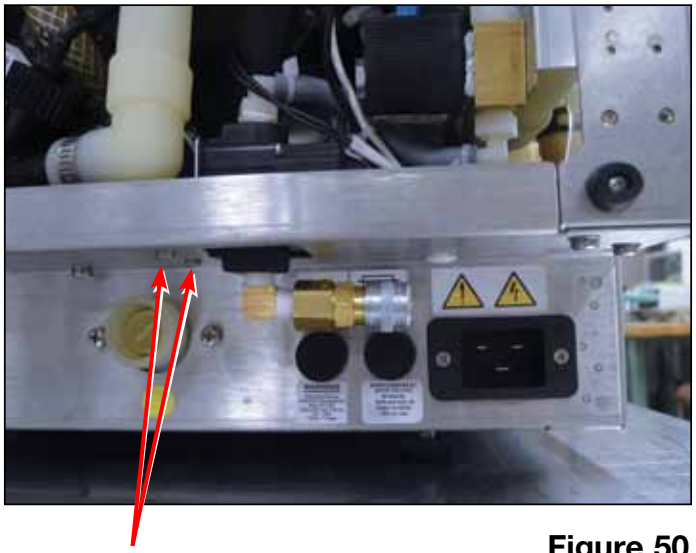
Figure 49d

12. Lumens Cleaning System (if fitted)

12.2 Removing and reinstalling the Lumens Cleaning System air supply

1. Disconnect the power and remove the back panel. (See Section 4.4 Removing and reinstalling the back panel.)
2. Disconnect the air supply tubing from the solenoid valve. (Figure 49c)
3. Remove the 2 screws fastening the air solenoid valve to the vertical upright and remove the solenoid.
4. Remove the 2 screws fastening the regulator bracket to the chassis and remove the regulator. (Figure 50)

To reinstall, reverse instructions



Regulator bracket screws

Figure 50

13. Spare Parts

This spare part list was last updated on the date of the release of the unit.
To see an updated spare part list, please refer to my.scican.com.

01-113265S	2-Level Pressure Switch, C61
01-113253	3 Cassette/2 Basket Rack, C61
01-113252	4 Cassette Rack, C61
01-113251	6 Cassette Rack, C61
01-113318S	Backflow Preventer, C61
01-113547	Basket w/ Hinged Lid, C61
01-113285S	Blower, 24V, C61
01-113284S	Blower, 5V, C61
01-113258S	Cable, Communication, C61
01-113259S	Cable, Ethernet, C61
01-113260S	Cable, RS232, C61
01-113261S	Cable, USB, C61
01-113321S	Cap, Softener, C61
01-113394S	Check Valve, C61
01-113282S	Chemical Carrier, C61
01-113334S	Condenser Assem., C61
01-113296S	Cover Bottom, C61
01-113297S	Cover Rear, C61
01-113633S	Cover Stainless, Door, C61WD
01-113288S	Cover Stainless, LHS, C61
01-113290S	Cover Stainless, RHS, C61
01-113286S	Cover Stainless, Top, C61
01-113315S	Decal, Door, C61WD
01-113356S	Deflector Assem., C61
01-113322S	Door Latch Assembly C61
01-113605S	Door Latch Microswitch, C61
01-113319S	Door Latch, Solenoid, C61
01-113661S	Door Seal, C61
01-113298S	Door Spring Kit, C61
01-113270S	Dual Temperature Sensor, C61
01-113313S	Duct Elbow, C61
01-113312S	Duct Inlet, C61
01-113324S	Duct, Vertical, C61
01-113329S	Fan, 24V, C61
01-113301S	Feet Adjustable, C61
01-113277S	Filter-Air, C61
01-113387S	Fixed Screen, Sump, C61
01-113545	Full Basket, C61
01-113262S	Gasket, Air Filter, C61

13. Spare Parts

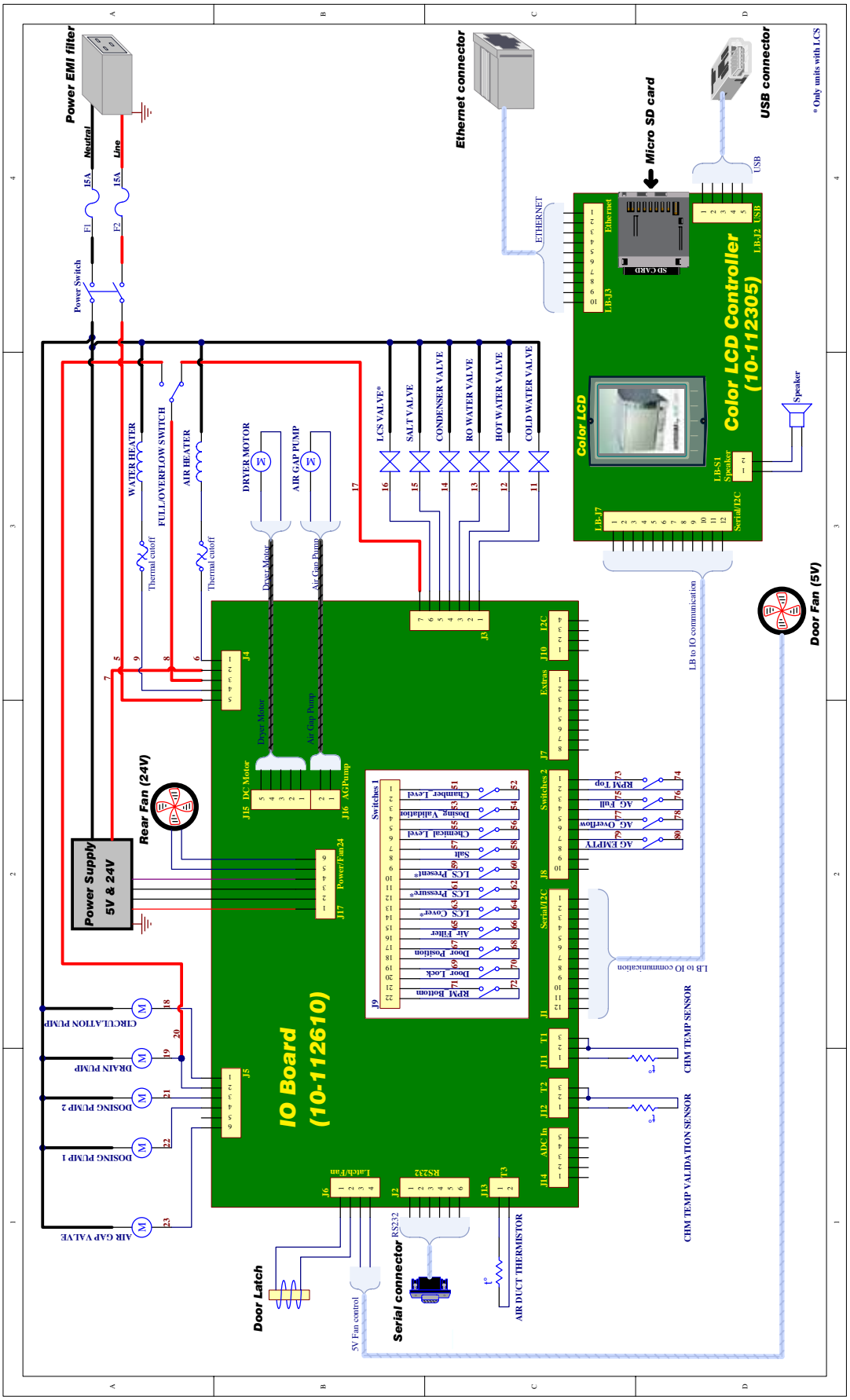
01-113320S	Gasket-Nut, Softener, C61
01-113267S	Harness High Power, C61
01-113268S	Harness Low Power, C61
01-113273S	Heater-Air, C61
01-113272S	Heater-Sump Kit, C61
01-113393S	Hose, Chemical Connection, C61
01-113546	Hygiene Basket, C61
01-113299S	Inner Door Panel, C61
01-113263S	Insulation Door, C61
01-113264S	Insulation Top, C61
01-113310S	IO PCB, C61
01-113292S	Kickplate Stainless, C61
01-113311S	LCD Assembly, C61
01-110505S	Line Filter, 20A/250V
01-113255	Lumen Rack, C61
01-113602S	Overflow Tray, C61
01-110281S	Power Cord N.A. 15A/250V, C61
01-110282S	Power Cord EU 16A/250V, C61
01-110283S	Power Cord AUS 15A/250V, C61
01-110284S	Power Cord S. Africa/India 16A/250V, C61
01-110286S	Power Cord Swiss 16A/250V, C61
01-110287S	Power Cord Israel 16A/250V, C61
01-110361S	Power Cord China 16A/250V, C61
01-113309S	Power Cord UK 13A/250V, C61
01-113308S	Power Cord Japan 13A/250V, C61
01-113266S	Power Supply 5V/24V, C61
01-113681S	Proximity sensor, C61
01-113283S	Pump, 24V, C61
01-113306S	Pump, Bellows, C61
01-113307S	Pump, Chemical, C61
01-113305S	Pump, Circulation 50Hz, C61
01-113303S	Pump, Drain, C61
01-113304S	Pump, Circulation, 60 Hz, C61
01-113323S	Reservoir Assembly, C61
01-113300S	Seal, Chamber, C61
01-113328S	Seal, Sump, C61
01-113325S	Softener, Assembly, C61
01-113682S	Speaker Assembly, C61
01-113332S	Strainer Assem., C61
01-113601S	Sump, C61
01-113327S	Switch, w/ Roller, C61

13. Spare Parts

01-113358S	Thermistor, C61
01-113600S	Top Arm Fitting, C61
01-113254	Tray/2 Basket Rack, C61
01-113256	Trolley Kit, C61
01-113257	Trolley, Center Support, C61
01-113331S	Valve, Inlet, 1 in-2out, C61
01-113330S	Valve, Inlet, C61
01-113302S	Wash Arm, C61
01-113333S	Wheel Set, Trolley C61
01-113317S	Packaging, C61

14. Appendix A

HYDR*IM* C61wd G4 Electrical Schematic



14. Appendix B

HYDR*IM* C61wd G4 & LCS Flow Diagram